US stranglehold over Neem and Turmeric continues

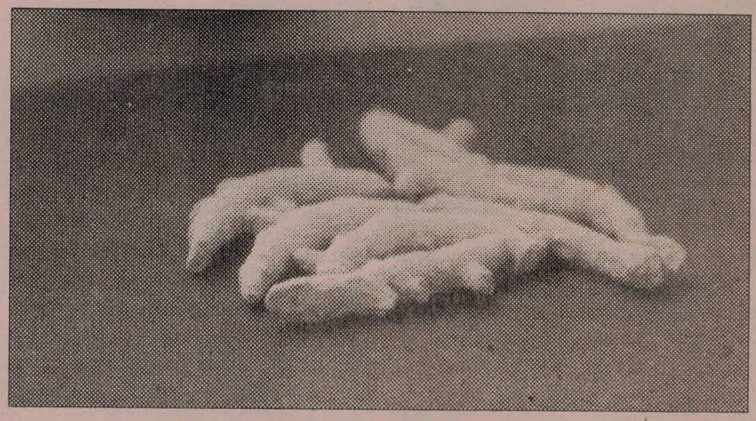
Govt yet to counter foreign onslaught on Indian natural curatives.

BANGALORE WEEKLY 2 JUNE 2000

By Naved Zahir

Have Turmeric and Neem really been freed from the clutches of the US and European companies? The answer is affirmative, though partly.

W[illegible]e the Patent rights of Ne[illegible] was acquired by a US based company, W R Grace and the United States Department of Agriculture (USDA), it was cancelled after a protracted legal battle on May 10 this year. Similarly Turmeric was released from the bonds of Patent Bill in 1997.



But this is not the end of the story. Though the Patent rights of the two prime natural curatives found in India have been quashed, they are yet to be completely free.

The truth is that hundreds and thousands of Patents have been acquired and simultaneously registered for Neem and Turmeric according to their quality. All the registered patents are `Procedure Patents.'

BIOTECH

It took a long time to break the stranglehold of the foreign companies by the Research Foundation for Science Technology and Ecology, an NGO, which fought a solo battle on the neem patent issue. Till date, other than raising a hullabaloo over the issue, the Union Government is yet to come up with a strategy to contest the remaining Patent rights of both Neem and Turmeric or other natural herbs that have been acquired by foreign companies under the Patent Bill.

Speaking to Explocity, officials of the Research Foundation said it is a herculean task to get the rest of the patents on neem cancelled due to the apathy of the government.

Foundation officials said that United States, Europe and Japan have acquired more than 100 patents on Neem so far. Few of the toughest nuts to crack are the patents numbering WO 9902533A1 and EP 874550A1. Interestingly, the Council for Scientific and Industrial Research (CSIR) has also acquired a patent on Neem in US bearing number 5602261. "Till recently there were only 67 patents registered for Turmeric but now it has shot up to more than a hundred," Foundation officials claimed.

"And it is very unfortunate that till date, we Indians, have be[illegible] able to shoot down only two patent rights, while a hundred each for all the goodies still remains," they said.

While the patent on Neem was cancelled following representations from a non-government organisation, the patent on Turmeric was brought down due to the efforts of the CSIR.

Considering the fact that large numbers of patents are 'Procedure Patents', ample preparations are needed to get them cancelled.

It may be noted here that the US company, W R Grace has claimed in its patent that the shelf life of the juice extracted from the leaves of the Neem can be increased to more than a year. (Otherwise, the life of the juice is to a maximum of five to six hours.) Sources in the CSIR reveal that it is "practically impossible" to get this kind of a patent cancelled.

With more and more foreign companies getting in, exploitation of natural wealth of India seems imminent even as the Union government continues to look the other way.

a postgraduate in Linguistics, a stroke of luck took her to the Cordon Bleu School in France for a course in Continental cuisine. Bangalore knows her as chef extraordinaire, running the well-known Florentine Catering service. She also does interior designing for Rocklines, acts as a food consultant for 5 star hotels, teaches Continental, Mexican, French

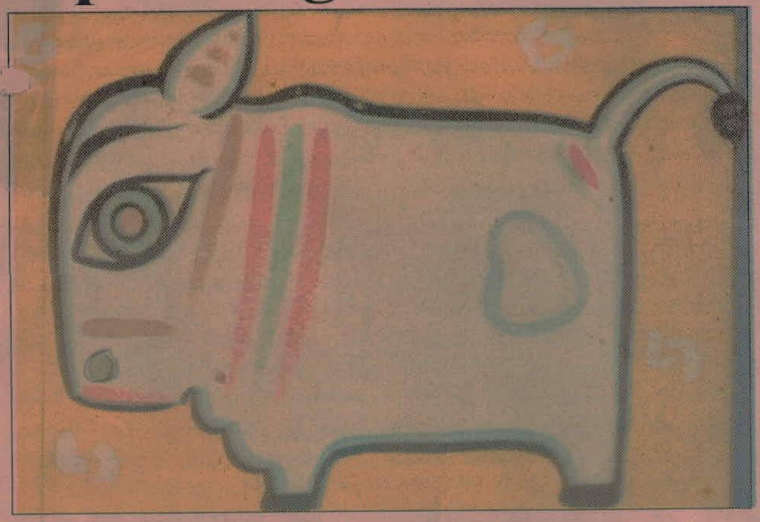
There appears a white knight to see us through KEB power cuts.

Bahmani convinced me otherwise.

For example, to make a dahlia, the hot wax is poured onto a slab and each petal is shaped and cut by hand. The petal is then stuck onto a base with hot wax. Definitely not for the delicate fingered. With no formal training in candle making, Bahmani works with constant experimentation and observation. Right now she is

ART

Arresting Jamini Roy paintings at Sakshi



By our art correspondent

Sakshi Gallery has put together - the works of Jamini Roy from private collections (for viewing only) and a few pen and ink sketches that are for sale.

Jamini Roy was born in Bengal in 1887 and belonged to the Calcutta School of art. He spent most of his life living and working in Calcutta and died in 1972. But his art lives on in the homes of art collectors and the memories of art enthusiasts.

His early works on display reflect the influence of the impressionists, Cézanne and Monet. But he soon created his own style drawing inspiration from the santhal folk dance, tribal art and his own traditional surroundings. Red, ochre, vermilion, grey, blue and white were the predominant colours used. The most striking aspect of Roy's paintings are line and definition and bold figures, that capture the simplicity of Indian rustic life.

The response to the exhibition has been excellent and has drawn newer patrons of art to Sakshi.

The exhibition in on till Jun 4.

HERBAL FIRST - AID KIT

MEDICINES AND THEIR USAGES

No.	Name of medicines	Indication.	Dosage.	Methord of Administration.
1.	Palkayam (Asafectida).	Stomache for Worm Infection.	5 m.g.	Grind and mixed with hot water and drink.
2.	Euchalyptus Oil.	Tooth ache and head ache.	a drope	Apply in the hole of the tooth in a cotton. For head ache apply it on the forehead.
3.	Jathikka (Nutmeg).	Vomiting, Diarrha.	5 m.g.	Grind and mix with hot water and drink
4.	Turmeric powder.	Cuts&Wonds, Stomach pain.	a pinch	Apply to the wond and bandage. For stomach pain eat mix with honey.
5.	Lemongrass oil+	Indigestion, gas trouble, stomach pain.	4 pepper	Eat 4 pepper kept early in the lemon grass oil.
6.	Ayamodakasath (Ajivam essance)	Stomach trouble.	5. m.g.	Mix with hot water and drink.
7.	Veluthulli, Elakkai.	Stomach trouble.	2 pice.	Chew it and drink the juice.
8.	Marmani Thailam.	Burning, cuts, banges, disdoc-ation, joint pains etc.	few drops.	Massage the affected part after applying the oil
9.	Vayugulika. (Ayurvidic pills)	Vomiting sen-sation, gas trouble.	3 pills.	Chew it and swallow.
10.	Villuadi gulika. (Ayurvidic pills)	Poisoness case.	1 gulika.	Grind and drink, apply a little on the injury p- (bite or cut)
11.	[illegible]	Cuts & Wounds	Little	Apply on the affected part

DRA - 10

11/25/03

DRA-10

Main Identity

From: "bala" <bala@haiap.org>
To: <slaas@itmin.com>
Sent: Tuesday, November 25, 2003 12:25 PM
Attach: cover page.doc, Intellectuall Property Rights and Herbal Medicines.doc 1 + 25 pgs
Subject: Intellectual Property Rights and Herbal Medicines,SLAAS Annual Sessions, Dec 2003.

ATTN : Ms. Manel - Administrative Officer,
General Secretaries

Dear Madam,

I have pleasure in attaching my presentation for the seminar.

I shall appreciate if you can let me know whether you have received all 24 pages clearly.

DS
— pl. panel
JN
13/2/04

Thanks and Regards,

Dr. K. Balasubramaniam.

Dr K Balasubramaniam
Advisor and Co-ordinator
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5, Level 2, Frankfurt Place
Colombo 4
Tel: + (94 11) 2554353
Fax: + (94 11) 2554570
E-mail: bala@haiap.org

as/11

B - TRIPS/IPR file

Jan

> Sarojini

DRA - 10.

CHC

From: "IndianSocietyFor SustainableAgriculture" <indiansocietyag@yahoo.co.in>
To: <nodice@globalnet.co.uk>; <s.prasad@cgiar.org>; <s_kavula@yahoo.com>; <anthra@hd2.dot.net.in>; <sakshi_ap@satyam.net.in>; <sambavna@sancharnet.in>; <sandeepc@actionaidindia.org>; <sandhya@bom3.vsnl.net.in>; <sandhyas@actionaidindia.org>; <Sara.Cottingham@vso.org.uk>; <Sarah.Hall@vso.org.uk>; <satyavalleti@yahoo.com>; <secretariat@phmovement.org>; <sgkabra@sancharnet.in>; <shashi@tehelka.com>; <sheelu1@vsnl.com>; <shivasundar35@rediffmail.com>; <shu@bbc.co.uk>; <sidur@tatanova.com>; <samata@satyam.net.in>; <smitashu@vsnl.com>; <smitu@usa.net>; <sochara@vsnl.com>; <speql@rediffmail.com>
Cc: <sputnik_k@hotmail.com>; <spwd_hyd@satyam.net.in>; <sreedhara@vsnl.net>; <srinivask99@yahoo.com>; <stephane.parmentier@mdmoxfam.be>; <goparajusudha@yahoo.com>; <sumitra_m_gautama@surfeu.fi>; <sunanda_vik@yahoo.com>; <surrender@eth.net>; <kavitha_kuruganti@yahoo.com>; <tukarams@uclink.berkeley.edu>
Sent: Tuesday, September 28, 2004 4:24 PM
Subject: ORGANIC FARMING & HERBAL MEDICINES

Here Are TWO News Items :-
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1. UK Firms To Sell Herbal Medicines (from Incas) In India
2. Rice-Wheat Consortium/CIMMYT Calls For ORGANIC FARMING

London Firm Set To Market Herbal Products In India

http://www.financialexpress.com/fe_full_story.php?content_id=69825

ASHOK B SHARMA & INDU BHAN
Posted online: Monday, September 27, 2004 at 0000 hours IST

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30/9

NEW DELHI, SEPT 26: Medicines and cosmetics prepared from the herbs grown in the land of ancient Inca civilisation are soon to be made available to India consumers through a new British company set up a naturopath of Indian origin.

The new London-based company, The Natural Health GB Ltd, set up by Dr Sashi Mohan Sharma is set to market a range of its branded herbal products in India. Mr Rakesh Arora has been appointed as marketing director for South Asia.

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Herbal medicines
resource
for
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"The product, Vigamax, an innovative blend of herbs and vitamins, is a natural, nutritional food supplement for increasing vigour, energy, vitality and stamina levels," said Dr Sharma.

Vigamx contains ingredients of the root powder of the Peruvian herb, akka Maca (Lepidium Meyenii Walp), Guarana and vitamins C and E of natural origin.

"Our products contain ingredients from natural and vegetarian sources and has no side effects. The company adopts transparent policy for marketing and distribution," asserted Dr Sharma.

He said that Maca was used by Peruvian natives over 3000 years. This resilient plant is grown approximately 4000 meters above sea level, in an extreme and diverse climate.

The hardiness of the Inca people who lived in severe cold at high altitudes is due to the consumption of this 'miracle' plant. The Inca warriors used to eat Maca before preparing for the

battle.

The other ingredient of Vigamax is Guarana, well known for its qualities to combat fatigue and reduce suspectibility to weather conditions. Guarana helps to alleviate diarrhoea and reduce the incidence of urinary tract infections.

Dr Sharma said that Vigamax was analysed by a public analyst in Germany and in UK, both of which have given certification of analysis and safety. "We will also be suggesting to hospitals to study the effects of our food supplements on patients," he said.

Other products in the range include Slim-n-Shape capsules made out of green tea extracts, TNH Shampoo, TNH Hair Growth Shampoo, TNH Hair Tonic, TNH Skin, Nail and Hair capsules, TNH Hair Oil, TNH Smile-n-Shine and TNH Face & Skin Beauty Cream.

The next product in the pipeline is Minchol, a vegetarian capsule for controlling and maintaining cholesterol levels, said Dr Sharma.

He said that all the products of the company are manufactured in France or Germany, following strict environmental and health safety standards. As these products are categorised as food supplements and are drug-free, no approval of either the drugs controller or FDA is necessary.

The company's director for international marketing, Paul F Brown said that the products are marketed to Sweden, Denmark, Holland and Austria from Germany. It is sold in retail stores in UK, Los Angeles, New York and Kanasas. "We are considering India as a gateway to South East Asia, Australia and South Africa," he said.

Mr Brown said that the UK Trade and Investment body under its scheme `Passport to Export' has supported the exports of these products through matching funding, export advises, training and subsidising the vist to the
first market.

Back To Basics, Exhorts Rice-Wheat Consortium Seminar

http://www.financialexpress.com/fc_full_story.php?content_id=69824

ASHOK B SHARMA
Posted online : Monday, September 27, 2004 at 0000 hours IST

NEW DELHI, Sept 25 : `Go Back to the Basics' by inching towards organic farming and conservation of water was the message the participants carried after the conclusion of regional seminar of the Rice-Wheat Consortium in Delhi, last week.

The week-long seminar orgainised jointly by the Mexico-based global research body on wheat and maize, CIMMYT and the Rice-Wheat Consortium had a component for visits to 59 farm sities across the country. About 40 participants including farmers, manufacturers of agri implements and scientists from Bangaladesh, Nepal and Pakistan participated in the seminar.

The Pakistan delegation included the parliamentarian, Dr Rozina Tulfail of the Muslim League.

The foreign delegates by and large expressed that they have learnt a lot about the practice of zero-tillage and conservation of water. Some suggested that India can also try some farm practices in vogue in their country.

Md Akhter Hossain Khan, principal scientific officer in Bangladesh Rice Research Institute (BRRI) was pleased to see the use of power tillers on small farm lands in India and said that the power tillers are mosted suited for Bangladesh were landholdings are small. He said that there is a need to reduce production costs through innovative technologies like conservation of water and minimum tillage of soil. The chief executive officer of the Dhaka-based Janata Auto Engineering, Mohammad Kader Nawaz said that he found Indian industry was open for discussions when he visited the manufacturing sites. He said that bed planters and seeders are manufactured in Bangladesh. There is need to manufacture suitable power tillers.

Dr Altaf Hussain, director of the Agriculture Research Institute in Sariab in Quetta in Baluchistan appreciated the the system of paddy transplanting through raised beds in India. He said that the practice of rice transplantation through raised beds involves conservation of the scarce resourse, water. Haji Abdul Rasool Khosa said that in Baluchistan province of Pakistan paddy is cultivated in only two out of 26 districts. The rice area is fed by water from a canal of Sakkur barrage. Due to scarcity of water farmers in the region are thinking of switching over to cotton. He said that he appreciated very much the practice of roof water conservation in Almorah district in Uttaranchal which can be replicated in Baluchistan and used in cultivation of paddy and horticulture crops.

Dr Nazir Ahmed, director, Rice Research Institute, Dekari, Sindh said that farmers in Jacobabad district can adopt zero tillage practice in cultivation of paddy. Dr Anjum Ali, director, Agriculture Institute for Adpative Research said that in Punjab province of Pakistan there is problems of soil degradation due to excessive use of chemical fertilisers and pesticides and depletion of ground water table. Also land holdings have become fragmented. Hence indegenous technology suited for small landholdings should be adopted coupled with measures like zero tillage and water conservation.

Dr Raghawendra Mishra. regional director, Agriculture Research Centre, Bara in Nepal said that the farm practices in Almorah district in Uttaranchal is best suited for a hilly country like Nepal.

Intellectual Property Rights and Herbal Medicines.

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Sri Lanka Association for the Advancement of Science
Annual Scientific Sessions, December 2003.

Theme Seminar "Herbal Medicines for the People"

Sri Lanka Foundation Institute
10th December 2003.

Contents

Executive Summary

An intellectual property is a creation of the mind. This will include, among others, artistic and literary works, inventions and trade marks. For protecting herbal medicines we need to focus on inventions. An invention is a product or a process which is new, useful and capable of manufacture. A patent is an intellectual property right (IPR) given for an invention by a government for a limited period of time. A patent gives the owner exclusive monopoly rights to manufacture, import, distribute and offer for sale the patented product; it prevents third parties from manufacturing, importing, distributing or offering for sale the patented product.

For an invention to be patentable it has to meet the following criteria.

- Novelty or
- Inventiveness / Inventive step
- Industrial Applicability

New pharmaceutical products introduced by research based pharmaceutical companies are good examples of inventions for which patent rights are given for limited periods of time.

Let us pose the question "Can herbal medicines be patented?"

Herbal medicines have been used for centuries. Knowledge about their preparation is well known and documented. The lack of novelty of the product and the process of manufacturing will, therefore prevent patent protection for well known herbal medicines.

There are other important practical hurdles related to the process of acquiring a patent.

- A patent application should be written in scientific legal language. This will require obtaining the services of a patent lawyer. This in combination with high costs of filing a patent, may make patents for herbal medicines prohibitively expensive for owners of herbal medicines.

- Another practical problem facing prospective patent holders of herbal medicines is related to the protection of their patents against infringement. In the first place a patent owner may not be aware of infringements; even if they are, legal action to defend the patent in court is usually very expensive and may be well beyond their means. And if a case would go to courts, an infringing company with more financial resources and better access to eminent patent lawyers may well succeed in convincing the court that its product, or process or use are sufficiently different from the original to constitute an invention of its own or at least not to constitute an infringement.

- And last but not least, patent protection of herbal medicines under the TRIPS Agreement will lead to an increase of their costs and restriction on their use or

diffusion. This will reduce access to the poor who are most dependent on herbal medicine.

The ongoing national and international debates and discussions on intellectual property rights and herbal medicines are, therefore not to explore possibilities for providing patent protection to herbal medicines but to

1. Conserve medicinal plants, genetic resources and biodiversities; and
2. Prevent misappropriation of traditional knowledge (TK) or bio-piracy.

Sections C,D and E of this paper deal with misappropriation of TK or biopiracy and conservation of medicinal plants, genetic resources and biodiversity. It needs to be emphasized that traditional knowledge has played and still plays an important role in vital areas such as food sovereignty, the development of agriculture and medicinal treatment. However, this paper will focus only on herbal medicines.

Bio-piracy has been defined as the process by which the rights of indigenous cultures and communities to their knowledge and genetic resources are "erased and replaced for those who have exploited indigenous knowledge and biodiversity".

The paper lists examples of a number of patents that have been granted on genetic resources and traditional knowledge obtained from developing countries without the consent of the possessors of the resources and knowledge. These include the "high profile" cases of neem & basmati rice. Many of these patents have been revoked by the competent national authorities. The sources of references are provided for those interested in more details.

The lack of novelty is a factor that will prevent patent protection for well known herbal medicines such as the neem. How was it possible for the US to grant these patents? The reason is a notorious problem relating to the standards of novelty in the US. Under the US Law, novelty is destroyed if an invention has been disclosed:

1. Through publication or
2. Through use in the US

Use outside the US does not destroy novelty. This is why patents have been granted in the US for traditional knowledge and genetic material used in developing countries for centuries.

The neem patent was revoked after the Indian Council of Scientific and Industrial Research was able to provide relevant scientific literature including an ancient Sanskrit text and a paper published in 1953 in the journal of the Indian Medical Association.

The justification for granting these patents in the US is as follows:

"Informal systems of knowledge often depend upon face-to-face communication, thereby limiting access to the information only to persons in direct contact with one another. The public at large does not benefit from the knowledge nor can the knowledge be built upon. In addition, if information is not written down, that

information is completely inaccessible to patent examiners everywhere as prior art when they are examining patent applications. It is possible, therefore, for a patent to be issued claiming as an invention technology that is known to a particular indigenous community. The fault lies not with the patent system, however, but with the inaccessibility of the knowledge involved beyond the indigenous community. The US patent granted for a method of using of turmeric to heal wounds, referred to is an example of a patent issued because prior art references were not available to the examiners. In that instance, however the patent system worked as it should. The patent claim was cancelled based on prior art presented by a party that requested re-examination.

And paradoxically the TRIPS Agreement which is designed to protect IPRs is silent about the bio-piracy of traditional knowledge and medicinal plants. Firstly TRIPS does not find out from where the patent applicant obtained his knowledge for the invention nor the owners of the resources or originators of the knowledge. Secondly TRIPS requires countries to allow patenting of micro-organism and micro biological processes. These two factors together with the loose interpretation of "inventiveness" in national patent offices allow bio-piracy – patenting of genetic resources and appropriation of developing country biological assets by research based companies in developed countries. It has been estimated that if a two percent royalty were levied on genetic resources, the North would owe the South more than US 5 billion in royalties for medicinal plants alone.

Uncontrolled and unregulated commercial collection, harvesting and processing of medicinal plants have led to the near extinction of some very valuable medicinal plants.

Section E lists four institutions that are known to engage in biopiracy.

Section F describes nine international initiatives for promoting sustainable consumption and conservation of medicinal plants, genetic resources and biodoiversity.

The final section gives conclusions and some recommendations.

The objectives of protecting TK include the following:

- Conservation of medicinal plants, genetic resources and biodiversities;
- Prevent misappropriation of TK (bio-piracy);
- Preservation of traditional practices and cultures;
- Promotion of TK and its importance in R&D of traditional medicines; and
- Fair and equitable distribution of the benefits derived from technologies and innovations based on TK.

At present there is no consensus on what would be the most appropriate way of protecting TK to achieve the above objectives. TK can be protected within and outside the IPR's system. IPR's are seen as one possible mean to protect TK. There

are strong supporters and severe critics of extending IPRs to protect TK. Annex 2 gives the conflicting views. Supporters argue that there are many examples of TK that are or could be protected by the existing IP system or by modifying certain aspects of the current form of IPR protection. Critics base their arguments on both practical reasons and principles, namely the essential incompatibility between concepts of modern IPRs and the practices and cultures of local and indigenous communities.

In view of the lack of consensus, it may be premature to initiate discussions towards development of international standards in the framework of the World Trade Organization, (WTO). The immediate priority should be the development of global rules to prevent the misappropriation of TK and use these as guidelines to develop national laws to prevent biopiracy.

The following are some of the activities proposed for protection of TK, genetic resources and medicinal plants.

- Promote the development, at the national level, of an holistic approach toward the protection of TK, Genetic resources and biodiversity;
- Develop workable models for the preservation and promotion of the use of TK, include as appropriate, legal mechanisms for the protection of TK against misappropriation;
- Collect and analyze existing national customary laws and practices relating to protection of TK.
- Work towards co-ordinating the various activities of all the international initiatives listed in section F.
- Consider the protection of TK in the context of the recognition and implementation of human rights.
- Improve awareness of the role of TK in fostering national innovation, researcher and development of Traditional Medicine.
- Propose amendments to the TRIPS Agreement requiring patent applicants to.
  i. disclose the origin of the resources or knowledge they are using.
  ii Obtain prior informed consent of the original knowledge holders and share benefits with them.
- Provide a specific and tight definition of "inventiveness" and novelty in national patent laws. This will exclude applications where the subject matter is not a real invention, or where the knowledge is already in the public domain.
- At the national level, a country should develop guidelines for the implementation of article 8 (j) of CBD. This article is reproduced below.
  "Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices"

Intellectual Property Rights and Herbal Medicines.

A. Introduction

Herbal medicines and traditional knowledge (TK) play an important role in the provision of healthcare in Sri Lanka and other developing countries. TK has also played and still plays an important role in vital areas as food sovereignty and development of agriculture. The use of herbal medicinal products is also significant in developed countries. The increasing commercial value of herbal medicines and a number of 'high profile' cases of misappropriation of biological resources and / or the associated knowledge have highlighted the need and stressed the urgency of protecting herbal medicines and traditional knowledge. Mechanisms need to be developed to ensure that knowledge and resources are not used without full, informed consent of their holders, and ways have to be found to ensure equitable sharing of benefits given for an invention by a government. A patent is an intellectual property right given for an invention for a limited period of time. It gives the owner exclusive rights to make, import, distribute and sell the patented product.

For an invention to be patentable it has to meet the following criteria.

i. Novelty;
ii. Inventiveness; and
iii. Industrial Applicability

In addition most patent laws require that the inventor (s) should be identified.

New pharmaceutical products introduced by research based drug companies are good examples of inventions. But herbal medicines have been used for centuries; knowledge about their preparation is well known and documented. Can they be patented? The turmeric patent illustrates this clearly [1].

In March 1995, a United States patent on "Use of Turmeric in Wound Healing" was granted to the University of Mississippi Medical Center. The claim covered "a method of promoting healing of a wound by administering turmeric to a patient afflicted with the wound". However, in India, the wound-healing properties of turmeric powder are well-known, and have been applied to the scrapes and cuts of generations of children.

In 1996, the Council of Scientific and Industrial Research of India (CSIR) requested that the patent for turmeric be revoked, on the basis that turmeric powder is widely known and used in India for its wound healing properties, and that a great deal of research has been carried out by Indian Scientists that confirms the existence of these

[1] 'TRIPS, CBD and Traditional Medicines concepts and questions.
Report of ASEAN Workshop on the TRIPS Agreement and Traditional Medicines. Jakarta 13-15 February 2001
National Agency for Drugs and Food Control, Indonesia, WHO

properties. Eventually, the patent was revoked on the basis of lack of novelty. CSIR succeeded in challenging the patent, because it was able to provide relevant scientific literature, including an ancient Sanskrit text and a paper published in 1953 in the Journal of the Indian Medical Association. In view of the criteria for patentability, we need to answer the following questions,

How can Intellectual Property Rights (IPRs) be used to protect herbal medicines and traditional knowledge?
Can exclusive rights over herbal medicines and traditional knowledge be sought under the TRIPS Agreement?

B. The TRIPS Agreement, Patent Laws and herbal medicines.

TRIPS is the acronym for Trade – Related Intellectual Property Rights, an international trade agreement. Sri Lanka is a signatory to this agreement. An intellectual property is a creation of the mind. This will include, among others, artistic and literary works, inventions and trade marks. For protecting herbal medicines and TK we need to focus on inventions. An invention is a product or a process which is new, useful and capable of manufacture. A patent is an intellectual property right (IPR) given for an invention by a government for a limited period of time.

The lack of novelty is a factor that will prevent patent protection for well known herbal medicines; while this is true in all countries, a notorious problem relates to the standards of novelty in the US. Under the US Law, novelty is destroyed if an invention has been disclosed.

(1) Through publications, or
(2) Through use in US.

Use outside the US does not destroy novelty; this is why patents have been granted in the US for traditional knowledge and genetic material used for centuries in developing countries.[2]

There are other important practical hurdles related to the process of acquiring a patent for herbal medicines in order to provide protection. A patent application should be written in scientific legal language. This will require obtaining the services of a patent lawyer. This, in combination with the high costs of filing for a patent, may make patents for herbal medicines prohibitively expensive.

Another problem facing prospective patent holders of herbal medicines is related to the protection of their patents against infringement. A patent holder may not be aware of infringements; even if they are, legal action to defend the patent in court is usually very expensive and may well be beyond their means. And if a case would go to court, an infringing company, with more financial resources and a better access to eminent patent lawyers may well succeed in convincing the court that it's product or process

[2] TRIPS , CBD and Traditional Medicines. Concepts and questions *opcit*

or use, are sufficiently different from the original to constitute an invention of it's own or at least not to constitute an infringement.

And last but not least, patent protection of herbal medicines under the TRIPS Agreement will lead to an increase of their costs and restriction on their use and diffusion. This will reduce access to the poor who are most dependent on herbal medicines.

The ongoing national and international debates and discussions on IPR and herbal medicines and TK are therefore, not to explore possibilities providing patent protection to herbal medicines but to

ii. Prevent biopiracy; and

iii. Conserve genetic resources, medicinal plants and biodiversity.

C. Biopiracy: the misappropriation of traditional knowledge.

Bio-piracy has been defined as the process through which the rights of indigenous communities and cultures to their genetic resources and knowledge are "erased and replaced for those who have exploited indigenous knowledge and biodiversity" [3]

In fact, a large number of patents have been granted on genetic resources and traditional knowledge obtained from developing countries without the consent of the possessors of the resources and knowledge. There has been extensive documentation of IPR being sought over resources "as they are", without further improvement (e.g., US patent No. 5,304,718 on quinoa granted to researchers of the Colorado State University; US Plant patent No. 5,751 on ayahuasca, a sacred and medicinal plant of the Amazonia) and on products based on plant materials and knowledge developed and used by local/indigenous communities, such as the cases of the neem tree, kava, barbasco, endod and turmeric, among others.[4]

Many of these patents have been revoked by the competent national authorities. The revocation of the patent on turmeric has been referred to earlier. In early 2000 the patent granted to WR Grace Company and US Department of Agriculture on neem (EPO patent No. 436257) was also revoked by the European Patent Office on the grounds of its use having been known in India. A re –examination request for the patent on Basmati rice lines and grains (US Patent No. 5,663,484) granted by the USPTO was also made by the CSIR [5]

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[3] Vandana Shiva, Afsar Jafri, Gitanjali Bedi and Radha Holla-Bhar, "The Enclosure and Recovery of the Commons", Research Foundation for Science, Technology and Ecology, New Delhi 1997

[4] Pat Roy Mooney, "The Parts of Life. Agricultural Biodiversity, Indigenous Knowledge, and the Role of the Third System" *Development Dialogue*, Special Issue, Uppsala, 1998

[5] R A Mashelkar , "The role of Intellectual Property in Building Capacity for Innovation for Development: A Developing World Perspective", WIPO, WHO Panel Discussion, New York, 2000

The US government has justified the problems posed by these patents as follows: "Informal systems of knowledge often depend upon face-to-face communication, thereby limiting access to the information to persons in direct contact with one another. The public at large does not benefit from the knowledge nor can the knowledge be built upon. In addition, if information is not written down, that information is completely inaccessible to patent examiners everywhere as prior art when they are examining patent applications. It is possible, therefore, for a patent to be issued claiming as an invention technology that is known to a particular indigenous community. The fault lies not with the patent system, however, but with the inaccessibility of the knowledge involved beyond the indigenous community. The US patent granted for a method of using turmeric to heal wounds, referred to is an example of a patent issued because prior art references were not available to the examiners. In that instance, however the patent system worked as it should. The patent claim was cancelled based on prior art presented by a party that requested re-examination. [6]

And paradoxically the TRIPS Agreement which is designed to protect IPRs is silent about the bio-piracy of traditional knowledge and medicinal plants. Firstly TRIPS does not find out from where the patent applicant obtained his knowledge for the invention nor the owners of the resources or originators of the knowledge. Secondly TRIPS requires countries to allow patenting of micro-organism and micro biological processes. These two factors together with the loose interpretation of "inventiveness" in national patent offices allow bio-piracy – patenting of genetic resources and appropriation of developing country biological assets by research based companies in developed countries. It has been estimated that if a two percent royalty were levied on genetic resources, the North would owe the South more than US 5 billion in royalties for medicinal plants alone. [6b]

D. Conservation of bio-diversity, genetic resources and medicinal plants.

High degrees of natural forest cover are extremely important for the preservation of diverse species of medicinal plants. There is evidence from studies reported by the World Health Organization (WHO), The International Union for Conservation (IUCN) and the World Wide Fund for Nature (WWF) that rain forests are being depleted due to deforestation and habitat fragmentation – declining at an alarming rate of 16.8 hectares per annum[7]. Tropical forests contain the largest number of known medicinal plants. In addition, they are also the largest resources of cultural knowledge and experience in the use of these plants as medicines. In the United States over 2,400 acres of native habitat are lost everyday. Many of the most

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[6] US General Declaration to the First Meeting of the WIPO Committee 01st May 2001

6b Fatal Side Effects : Medicine Patents Under the Microscope, Oxfam. This publication is available from Oxfam website (www.oxfam.org.UK/outthecase)

[7] The World Health Organization (WHO). The International Union for Conservation of Nature (IUCN) and World Wide Fund for Nature (WWF), 1993, Guidelines on Conservation of Medicinal Plants, CASTLE Gray Press, UK.

important native medicinal plants, used by the first humans to inhabit North America, are threatened with extinction [8].

The velocity of global genetic resource degradation and depletion is both extraordinary and accelerating threatening species depletion of immense proportions.[9]

If the present trends of depletion continues, the WHO, IUCN and WWF, based on studies in 1988 and 1994 estimated that by the end of the 20th century about 20,000 plants used in traditional medicines as healing agents would become extinct and by the middle of the 21st century, some 60,000 higher plant species may become extinct or near extinct. [10] [11] Two recent World Bank reports on medicinal plants have also drawn attention to the same issues, namely the loss of medicinal plants. [12] [13]

The negative impacts of commercial collection, harvesting and processing of medicinal plants causing tremendous short and long term damage to both communities and eco systems have been well documented. One well known example is a UNESCO report on the African plant *Prunus Africana* [14]. Another example comes from South America. Cats Claw is a jungle plant whose bark contains substances which boost the human immunological system and which have been found to be effective against certain types of cancer. Cats Claw is one of the best known medicinal plants in the indigenous pharmacopoera in Peru. It is almost extinct due to massive extraction by foreign pharmaceutical companies. In July 1999 Peru passed a law which prevents non value – added export of some botanical species, including Cats Claw [14B].

Many species of medicinal plants in the Himalayan forests are now in danger of extinction. In the late 1950's soon after reserpine was introduced as a therapeutic agent, Rauwolfia serpentina became almost extinct from the Himalayas. Now it is Taxus baccata which grows at 1600 meters above sea level. The leaves of this plant yield taxol, an anticancer drug. Commercial collectors rape the forests and sell through middlemen at US$ 3.50 per kg to city based exporting firms. This species has disappeared from large parts of India and Nepal. [15]

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[8] Liebmann R. "Strategies for the Preservation of Commercially at Risk Native Medicinal Plants of North America: The Transition to Sustainable Cultivation" in International Symposium in Herbal Medicines, Honalulu, Hawaii, 1-4 June 1997 organized by the University of San Diego in California in collaboration with the United Nations Industrial Development Organization.

[9] Falk D.A., Millar C.I. and Olwell M (Eds) (1996) Restoring Diversity: Strategies for Reintroduction of Endangered Species. Island Press, Washington DC.

[10] "Saving Lives by Saving Plants" International Declaration adopted at Chiang Mai World Health Organization, Press Release WHO 14-15th April 1988.

[11] Worldwatch Institute (1994) A Worldwatch Institute Report on "Progress Towards a Sustainable Society", Norton, New York.

[12] Lambert J., Srivastava J and Vietmeyer N. "Medicinal Plants: rescuing a Global Heritage". World BANK Technical Paper No. 355, the World Bank, Washington DC, 1997.

[13] Srivastava J., Lambert J & Virtmeyer N. "Medicinal Plants: An Expanding Role in Development". World Bank Technical Paper No. 320, The World Bank, Washington DC, 1997.

[14] Cuunigham, A.B. & Mbenkum F.T. 1993, "Sustainability of Harvesting *Prunus Africana* bark in Cameroon: A Medicinal Plant in International Trade " *People & Plants Working Paper #2, Paris : UNESCO*

[14B] – TRIPS, CBD and Traditional Medicines *opcit*

[15] Uniyal M. "Medicinal Plants Need a Cure". *Bangkok Post*, 14 October 1993, Bangkok.

Trade in medicinal plants is known as one of the least monitored, least regulated and most secretive in the world. Medicinal plants are traded in the absence of tariff restrictions since most medicinal plants and crude drugs are exempt from duty. [16]

Over-exploitation of medicinal plants growing in the wild are major environmental protection concerns according to WHO, IUCN and WWF [17]. Non sustainable harvest practices and rates can lead to losses of large numbers of individual plants within populations, to extermination of a species [18].

A number of organizations in the US are actively engaged in supplying biological specimens from the tropical forests of Latin America to the pharmaceutical industry for further exploitation. This has been described under the title "Bio-prospectors Hall of Shame... or Guess Who is coming to Pirate your Plants"? [19].

E. Who is coming to pirate your Plants?

- ***Pharmacogenetics of Bethesda*** , Maryland supplies biological specimens from the tropical forests of Latin America to pharmaceutical, chemical, agricultural and cosmetic companies. Pharmacogenetics is partly owned by the Pan-American Development Foundation (PADF) a private voluntary organization which has provided technical assistance to indigenous and rural groups throughout Latin America for over 30 years. Pharmacogenetics, will use its link to PADF to organize plant identification and establish contacts with indigenous groups. Will these indigenous communities be fully informed that the non-profit PADF is also part owner of a for –profit commercial business that will collect thousands of biological specimens each year, screen them for special biological activity, and then isolate and obtain patents for the active compounds?

- ***Maxus Petroleum*** of Dallas, Texas is in the business of extracting not just petroleum, but also tropical plants from Ecuador's primary tropical forest. The company is building 120 km road for oil exploration, and has contracted with the Missouri Botanical Garden to collect and catalogue plants it encounters along the way. Conveniently, the road traverses the Yasuni National Park and Waorani Ethnic Reserve. According to Maxus, 1,200 plant species have already been gathered, 18 of which are new to the scientific world, and 20 new species in Ecuador.

- ***Knowledge Recovery Foundation International*** of New York city proposed to develop a medicinal plant extractive 'library'. The foundation's long term goal is to develop a well documented, well-preserved library of plant extracts (including detailed information on local ethno medical uses) that can be "rented" to pharmaceutical companies for screening. According to the Knowledge Recovery

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[16] Lewington A. *A review of importation of medicinal plants and plant extracts into Europe* Traffic, Cambridge, England, 1993

[17] WHO, IUCN and WWF 1993 *Guidelines on the Conservation of Medicinal Plants* . Gland, Switzerland: IUCN

[18] Given D.R. 1994. *Principles & Practices of Plant Conservation,* London, UK.

[19] Bioprospecting / Biopirary and Indigenous Peoples, *RAFI, Communique International, 1994*

Foundation, entries could be screened from a fee of $25 to $50 per extract, and the Foundation will guarantee the re-collection of any sample which the company wants to investigate in more detail. **The Foundation proudly asserts that, "what the pharmaceutical companies are getting when they rent the extract to be screened is intellectual property, not material property."** Companies will be required to sign an agreement that, if a drug should be developed based on one of the collections furnished from the library, they will return a small royalty (0.1 to 0.2%) to the indigenous peoples of the country where the collection was made.

- ***Floating Bio-Pirates:*** **The Knowledge Recovery Foundation International** also proposes to purchase a river going vessel with a "mobile collection" laboratory. As the Foundation puts it, "This is preferable from a logistical point of view, in that it would enable collections to be made from any part of the Amazon that was accessible by river, and would not restrict us to working within a single extractive reserve"

The problems of loss of useful plant species arise only when a successful product has been developed and it cannot be synthesized. Enormous amounts of plant materials will then be necessary for commercial production of the product. The amounts of dried plant material required for the various stages of drug development beginning at initial screening and leading to the commercial production of a drug has been estimated [20]. These estimates are based on the assumption that the concentration of the active material is extremely low.

- Initial screening and isolation of a new chemical entity – 5kg
- Confirmatory screens and initial development – 50 kg
- Additional research and development through clinical testing – 200 tons
- Commercial production of the drug – 200,000 tons per year.

F. Conservation of Genetic Resources and Biodiversity – International Initiatives.

According to the WHO the vast majority of the world's population (estimates about 80 per cent) depend on herbal medicines for their primary health care. There is therefore a need to ensure:

- Availability of safe and effective herbal medicines of good quality for all who need them; and
- Continuous supply of medicinal plants.

While scientists in universities and research institutes have focused their attention on screening medical plants for biologically active compounds and evaluating herbal remedies, little attention was given to conservation of biodiversity. This has resulted in serious genetic erosion, loss of biodiversity, extinction of several useful medicinal plant species threatening the continuous and regular availability of herbal medicines.

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[20] McChesney J. "Biological diversity, chemical diversity and the search for new pharmaceuticals", paper presented to the Rainforest Alliance Symposium onTropical Forest Medical Resources and the Conservation of Biodiversity, 24-25 January 1992, New York.

The health care needs of more than four billion people, who depend on traditional systems of medicines, are in danger.

In response to this crisis, a large number of inter governmental and international agencies have set in motion a series of initiatives to promote sustainable consumption and conservation of bio-diversity. Biological diversity plays a pivotal role in the sustenance of life on earth.

Sustainable consumption means the use of components of biological diversity in a way and at a rate that does not leads to long term decline in biological diversity thereby maintaining its potential to meet the needs and aspirations of the present and future generations. (The United Nations Convention on Biological Diversity, Article 2, 1992)

International Initiatives

1. The Chiang Mai Declaration

"Saving Lives by Saving Plants", 1988

i. A major International Consultation on Conservation of Medical Plants organized jointly by the WHO, the International Union for the Conservation of Nature (IUCN) and The World Wildlife Fund (WWF) met in Chiang Mai, Thailand from 21-26 MARCH 1988.

ii. The Consultation issued the Chiang Mai Declaration, "Saving Lives by Saving Plants", stating that participants:

- recognize that medicinal plants are essential in primary health care, both in self-medication and in national health services;
- are alarmed at the consequences of loss of plant diversity around the world;
- view with grave concern the fact that many of the plants that provide traditional and modern drugs are threatened;
- draw the attention of the United Nations, its agencies and Member States, other international agencies and their members and non-governmental organizations to:
  a. the vital importance of medicinal plants in health care;
  b. the increasing and unacceptable loss of these medicinal plants due to habitat destruction and unsustainable harvesting practices;
  c. the fact that plant resources in one country are often of critical importance to other countries;
  d. the significant economic value of the medicinal plants used today and the great potential of the plant kingdom to provide new drugs;

4. procedures be developed to compensate native peoples for the utilization of their knowledge and their biological resource;
5. educational programmes be implemented to alert the global community to the value of ethnobiological knowledge for human well being;
6. all medical programmes include the recognition of the respect for traditional healers and incorporation of traditional health practices that enhance the health status of these populations;
7. ethnobiologists make available the results of their research to the native peoples with whom they have worked, especially the dissemination of these in the native language;
8. exchange of information be promoted among indigenous and peasant peoples regarding conservation, management, and sustained utilization of resources."

8. The 7th Asian Symposium on Medicinal Plants, Spices and Other Natural Products (ASOMPS), February 2-7, 1992, Manila, Philippines.

Nearly 300 scientists participated in the above symposium organized under the auspices of UNESCO in collaboration with the International Foundation for Science (IFS), the Asian Co-ordinating Group for Chemistry (ACGC) and other bodies in the University of Philippines. [27]

The Scientists expressed concerns that:

- Plant samples from tropics where most Third World countries are located are collected in an "uncontrolled manner" and taken to Europe, Japan or North America for their drug value. The discoveries are then covered by patent laws granting exclusive rights and subsequent profits to the one who applies for it.
- The local botanists and foresters collect the plants without fully realizing the potential value of the resource. Moreover the folk herbalists rarely get credit for the important scientific findings they often foster.
- The participants unanimously agreed that collection and export of all biological resources must be controlled.

9. Intergovernmental Committee on Intellectual Property and Genetic Resources, Traditional Knowledge and Folklore. (The WIPO Committee)

This Intergovernmental Committee was established by the World Intellectual Property Organization (WIPO) in 2000. -The objective of this committee is to address the needs of traditional healers identified by the WIPO.

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[27] Cecelia Quiambo, "Good medicine, Bitter Pill" – Scientist at Manila Symposium call for bigger Third World Share of medicinal plant wealth" – UNESCO, sources no.35 March 1992.

The needs identified include,

i. The prevention of the acquisition of intellectual property rights over traditional medicine by its documenting and publication as searchable prior art.
ii. A reassessment of what constitutes prior art for purposes of patent examinations;
iii. The testing of options for the collective management of IPR by traditional healers associations;
iv. A study of customary laws which protect traditional medicine in local and traditional communities;
v. Testing the applicability of the present intellectual property system for protection of traditional medicine;
vi. Facility access to intellectual property system for traditional medicine practitioners;
vii. Legal and technical assistance with the documentation of traditional medicines; and
viii Awareness raising as to the role of intellectual property protection in relation to traditional medicine.

This Committee, now known as the WIPO Committee met for the first time on 30th April – 02nd May 2001. Several delegates reported on the initiatives taken at national levels for the protection of TK. They were supportive of the idea of exploring the possibilities of legal protection of TK under IPRs. The US delegation had a different view and made the following statement. " Is it possible or even desirable to establish a comprehensive uniform set of rules at the international level to govern the use of genetic resources, TK and folklore before individual countries have, in conjunction, with the communities within their borders, established their own regimes for protection within their own territories and have gained experiences in the application of that protection and its effect on the communities involved?

The newer generation of intellectual property laws share certain characteristics with the older generation of intellectual property laws of copyrights, inventions and trade marks namely:

- An incentive mechanism for innovation;
- Date of creation;
- Known identity of creator (s);
- Defined parameters of the relevant products; and
- Limited duration of patent protection knowledge.

A regime to protect TK, cannot by definition adhere to these principles.

Many of the goals of indigenous and local communities in "protecting" their TK, medicine, folklore etc stem from their concern for self-determination, health,

justice, cultural heritage and land issues. These are serious interests that must be examined fully within the appropriate national contexts [28].

G. Conclusions and Recommendations.

The objectives of protecting TK include the following:

- Conservation of medicinal plants, genetic resources and biodiversity;
- Prevent misappropriation of TK (bio-piracy);
- Preservation of traditional practices and cultures;
- Promotion of TK and its importance in R&D of traditional medicines; and
- Fair and equitable distribution of the benefits derived from technologies and innovations based on TK.

At present there is no consensus on what would be the most appropriate way of protecting TK to achieve the above objectives.

Whatever the regime is eventually developed, the most effective way to protect TK should take into consideration the following:

1.Policy issues:
   - Objectives and modalities of such protection; and
   - Impact and implications on its intended beneficiaries

2.Technical issues;
   - Problems of collective ownership;
   - Modes of enforcement of rights.

3.Ethical, environmental and socio economic concerns.

In this context, Thailand has enacted a sui generic regime on traditional medicines (Annex 1)

TK can be protected within and outside the IPRs system. IPRs are seen as our possible means to protect TK. There are strong supporters and severe critics of extending IPRs to protect TK. Annex 2 gives the conflicting views.

Supporters argue that there are many examples of TK that are or could be protected by the existing IP system or by modifying certain aspects of the current form of IPR protection [29]. Critics base their arguments on both practical reasons and principles, namely the essential incompatibility between concepts of modern IPRs and the practices and cultures of local and indigenous communities [30]

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[28] General Declaration of the USA to the First Session of the WIPO Committee 30th April – 02nd May 2001.
[29] WIPO – *Intellectual Property needs and expectations of traditional knowledge holders*, Geneva, 2001

[30] The Crucible 11 Group. *Sending Solutions; Policy Options for genetic resources. Peoples Plants and Patents revisited*, Vol 1.
IDRC – IPGRI, Rome 2000. Available at http//www.idrc.ca/books/926/05part 2_01.html

In view of the lack of consensus, it may be premature to initiate discussions towards development of international standards in the framework of the World Trade Organization, (WTO)

The immediate priority should be the development of global rules to prevent the misappropriation of TK and use these as guidelines to develop national laws to prevent biopiracy.

The following are some of the activities proposed for protection of TK [31].

- Promote the development, at the national level, of a holistic approach toward the protection of TK, genetic resources and biodiversity;
- Develop workable models for the preservation and promotion of the use of TK, including, as appropriate, legal mechanisms for the protection of TK against misappropriation;
- Collect and analyze existing national customary laws and practices relating to protection of TK.
- Work towards co-ordinating the various activities of all the international initiatives listed in section F.
- Consider the protection of TK in the context of the recognition and implementation of human rights.
- Improve awareness of the role of TK in fostering national innovation, researcher and development of Traditional Medicine.
- Propose amendments to the TRIPS Agreement requiring patent applicants to:
  i. disclose the origin of the resources or knowledge they are using.
  ii Obtain prior informed consent of the original knowledge holders and share benefits with them.
- Provide a specific and tight definition of "inventiveness" and novelty in national patent laws. This will exclude applications where the subject matter is not a real invention, or where the knowledge is already in the public domain.
- At the national level, a country should develop guidelines for the implementation of article 8 (j) of CBD. This article is reproduced below.
  "Subject to its national legislation, respect, preserve and maintain knowledge, innovations and practices of indigenous and local communities embodying traditional lifestyles relevant for the conservation and sustainable use of biological diversity and promote their wider application with the approval and involvement of the holders of such knowledge, innovations and practices and encourage the equitable sharing of the benefits arising from the utilization of such knowledge, innovations and practices"

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[31] Carlos M.Coorea, "Traditional Knowledge and Intellectual Property". A Discussion Paper. Issues and options surrounding the protection of traditional knowledge. Commissioned by the Quaker United Nations Office (QUINO) Geneva with financial assistance from the Rockefeller Foundation. (Available in downloadable electronic format from http//www.QUINO.org. click on Geneva paper.

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   Report on an ASEAN Workshop on the TRIPS Agreement and Traditional Medicine.
   Jakarta 13-15 February 2001, National Agency for Drug and Food Control, World Health Organization.

3. Traditional Knowledge and Intellectual Property Issues and Options surrounding the protection of traditional knowledge.
   A Discussion paper by Carlos M. Correa,
   Quaker United Nations Office, Geneva, November 2001.

Annex 1

A *sui generis* regime on traditional medicine : Thailand

Thailand has developed a comprehensive sui generis regime for TM.
The "Thai Traditional Thai Medicinal Intelligence Act" distinguishes three different categories of "Traditional Formulations"

National Formulae are formulations given to the Nation which are crucial for human health.

The Act stipulates that the ministry of Public Health has authority to announce a certain formula of traditional Thai medicine as a national formula. In this case, the traditional formula should be of significant benefit or have special medical value. After the announcement, the rights of such a formula belong to the State. The commercial use of a national formula for the production of drugs or for research and development, is subject to permission from the government (criminal sanctions are provided for under the act for infringement).

Private Formulae can be freely used by the owner. The request for the registration of a private formula can be submitted by an inventor or developer of the formula; or an inheritor of the inventor or developer of such a formula. The act grants exclusive rights by allowing the owner of the registered personal formula for research and to sell and distribute any product developed or manufactured by using the formula. However, there are certain limitations to the exclusive rights. The rights over a registered personal formula subsist throughout the life of the owner and for a further 50 years form the date the applicant dies. One of the main objectives of the sui generis protection is that the exclusive monopoly granted by the State should enable the owners of traditional knowledge to be adequately compensated for their contributions. Third parties must obtain permission from the owner to use the formula.

General Formulae, finally, are well known traditional formulae that remain free to use by anybody.

One important feature of this law is that all three types of formula can continue to be used free domestically by traditional healers or Thai communities in a limited quantity. The law also provided for measures aimed at the conservation and sustainable use of the medicinal plants, specially those at high risk of extinction. In addition, The Institute of Traditional Thai Medicine was formally established (after having being in operation for seven years). The Institute is governed by a committee composed of equal numbers of NGO's and governmental officials. Registrations and other activities are distributed among 75 provincial offices throughout Thailand. A "Thai Traditional Knowledge Developing Fund" was also created. The Thai regulations have permitted the registration of over 700 licensed local manufacturers producing traditional medicine. In 1998, there were already 4,300 formulations registered with Thai FDA and still increasing. The total value of production in 1999-

2000 was around 320 million baths, without including traditional medicines individually produced by healers.

Sources –

Jakkrit Kuanpoth, "Legal Protection of Traditional Knowledge: The case of Thai traditional medicine". Paper presented at the at the ASEAN Workshop on the TRIPS Agreement and Traditional Medicine, WHO, Jakarta, 15 Feb 2001

Pennapa Subcharoen, Omboon Luanratana, Jugkrit Kuanpoj and Suradeth Assawintrangura, "Indigenous Knowledge and Intellectual Property rights in the context of traditional medicines. BANGKOK, 8-10 Dec 2000

Annex 2

Conflicting Views. (Carlos Correa *opcit*)

(i) "There are many examples of TK that are or could be protected by the existing IP system. In addition, while many informants believe that the present IP system does not adequately recognize TK holders' rights, they are interested in undertaking further work on how the IP laws and system can be modified to curb those aspects of IP laws and systems "which allow piracy or seen to condone it". Several informants also suggested certain modifications to IP law to improve its functionality in TK protection, and, others, new IP tools".
WIPO Intellectual property needs and expectations of traditional knowledge holders. Geneva 2001

(ii) " Patent and copyright not only presume that the act of innovation is largely individual rather than social, but that innovators are motivated by financial gain, and that it is the role of the state, rather than innovators to, to ensure that new knowledge is used responsibly. In my experience, custodians of local knowledge believe that knowledge is socially created, through interaction amongst humans and non-humans; that individuals are obliged to put their knowledge to use unselfishly; and that teachers of knowledge possess an inalienable responsibility to ensure its proper use"
Russell Baosh. " Who steals indigenous knowledge? (mimio) New York University and First Peoples World Wide, New York 2001

(iii) "In order to protect and encourage (TK), the necessary conditions may be in place, namely, security of tenure over traditional terrestrial and marine estates; control over and use of traditional natural resources; and respect for the heritage, languages and cultures of indigenous and local communities, best evidenced by appropriate legislative protection (which includes protection of intellectual property, sacred places, and so on"
Executive Secretary of the Biodiversity Convention in Traditional Knowledge and Biological Diversity. UNEP/CBD/TKBD/1/2 October 18,1997.

(iv) Many participants, particularly representatives from indigenous organizations, felt that most existing legal framework didn't reflect their concerns adequately. They argued that the premise of intellectual property is based on terms and conceptual foundations that remain outside their worldview. As an alternative, some advocated an integrated approach to the protection of traditional knowledge as illustrated by the ANDES initiative called "elparque de la papa" which aims to create a protected area of agro-biodiversity, genetic resources and traditional knowledge. Often discussions over specific mechanisms to increase the equality of resource transactions overlook the fundamental inequalities that exist between actors. Therefore, the expanded participation of indigenous groups and local communities at the design, development and implementation stage are essential to processes of building socially responsible regimes for the regulation of resources. Furthermore, issues such as equitable benefit sharing maybe secondary to the more basic issue of defining ownership rights".
Report of the Multistakeholder Dialogue on Trade, Intellectual Property and Biological and Genetic Resources in LATIN America, Cusaco, Peru, 22-24, February 2001 (http://www.ictsd.org/dialogueweb/texts/report2.htm)

DRA-10.

Herbal Medicines: A Holistic Approach

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2nd International Workshop on Herbal Medicines in the Caribbean
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Contents

Herbal Medicines: A Holistic Approach

Executive Summary

Herbal medicine is as old as human kind and as contemporary as the latest discovery in biomedical science. A wide spectrum of sectors, issues and activities are encompassed within herbal medicine together with a number of stakeholders including several intergovernmental and international agencies.

A holistic approach to herbal medicine needs to take into consideration and examine the various sectors, issues and activities and the needs and concerns of the different stakeholders. Quite often each stakeholder group examines its particular sector in isolation ignoring the ultimate objectives. Consumers, on the other hand, are concerned with each and every sector, issue and activity in this long and complex chain.

The ultimate objectives of the consumer include the following:

- ensuring the availability, accessibility and affordability of safe and effective herbal medicines of good quality to all those who need them now and in the long term future;
- regulating the manufacture, promotion, sales and use of herbal medicines to ensure the safety of consumers;
- defining the place of herbal medicine in primary health care;
- searching for new medicines among the many medicinal plants that are yet untapped;
- looking for, protecting and preserving endangered plant species;
- conserving biological diversity; and
- searching, protecting and preserving indigenous cultures which are the repositories of the knowledge of medicinal plants.

It is indeed a paradox that in an era of molecular biology, genetic engineering, biotechnology, computerised drug design and an annual global pharmaceutical market of over $300 billion, herbal medicines serve the health care needs of 80 per cent of the world's population, or over four billion people.

There is evidence that consumers in developed countries are becoming disillusioned with modern health care and are seeking alternatives. Consumer demand for herbal medicines is, therefore, increasing in these developed countries.

The multinational drug industry in the North is showing renewed and heightened interest in the South's medicinal plants. Over 200 firms are screening plants for medicinal properties.

However, in both developing and developed countries, there are no integrated national policies on herbal medicines to facilitate drug administrators to regulate the manufacture, trade, promotion, sales and use of herbal medicines.

There is an urgent need for national policies on herbal medicines with regulatory control to regulate the herbal medicine market.

The lethal combination of increased consumer demand, the renewed industry interest in bioprospecting and the lack of national legislation or effective international agreements on conservation of biodiversity has resulted in 'slaughter harvesting' of medicinal plants and massive depletion of biodiversity.

Tropical rain forests are the home to 70 per cent of the million or so species of higher plants that are believed to inhabit the earth. Fewer than one per cent of the tropical rain forest species has been examined. Of the total plant material utilised in the preparation of traditional medicine, about 90 per cent are collected from the tropical forest.

Indigenous cultures living close to these plants, use thousands of them in their medical practice. Many of these have not even been named, let alone studied. Indigenous people know much more about the properties of these plants than modern scientists. This knowledge is community owned intellectual property but there is evidence that this knowledge is pirated by the multinational drug industry and patented as private intellectual property.

High degrees of forest cover are extremely important for the preservation of diverse species of medicinal plants. Tropical rain forests are declining at an alarming rate of 16.8 hectares per year. Since 1970 tropical forests have declined from 4.4 sq. mile per 1000 people to 2.8. In the US 2400 acres of native habitat is lost everyday.

The conflagration of tropical rain forest threaten not only countless species of valuable medicinal plants but also the indigenous cultures and individuals who know their properties and use them in their daily lives. What we are witnessing today makes the burning of the library in Alexandria look insignificant by comparison. It is as if the greatest medical library in the world is burning faster than we can read its contents, which we have just begun to catalogue.

Several intergovernmental and international agencies have been sounding alarm bells during the last two decades to raise global awareness on the

enormous extent of loss of biological diversity and threatened extinction of tens of thousands of valuable medicinal plants. Health professionals have raised serious concerns on the lack of regulatory control of herbal medicines, nutraceuticals and dietary supplements that are promoted as drugs and abuse of herbal remedies.

The alarms, concerns and fears were based on critical analysis of enormous empirical data. Remedial measures were carefully considered and rationally presented in the form of comprehensive conclusions and recommendations.

The commitments made at the international summits have turned up to mere lip service. There is no evidence that any of the recommendations have been implemented. The dramatic pleas and recommendations were made to appreciative but docile audiences – scientists, research workers and international civil servants. These people are no match for the vested interests who are depleting genetic resources, threatening several plant species and heavily promoting thousands of ineffective phyto-pharmaceuticals, nutraceuticals and dietary supplements directly to the consumer. Sales of these "natural products" are skyrocketing.

The paper argues that the inability of the international initiatives to bring about appropriate changes in public policies and national legislation is due to their failure to inform and educate the voting public and thereby mobilising their support for campaigning and lobbying for changes in public policies.

The history of humankind clearly illustrates that changes in public policy are possible only through mass movements when the entire general (voting) public is sincerely convinced of the urgent need to bring about appropriate changes.

The paper concludes with a "People's Guide to Herbal Medicines and Medicinal Plants". This guide attempts to present the relevant conclusions and recommendations arrived at various international summits in a way people will understand and rally round to support a campaign to implement the various resolutions reached by global consensus.

1. Introduction

A holistic approach to herbal medicines which are as old as humankind and as contemporary as the latest scientific discoveries in biomedicine needs to take into consideration and examine a wide spectrum of sectors, issues and activities including the following:

- sources of medicinal plants;
- sources of information on medicinal plants;
- identification, cultivation, harvesting, storage and international trade of medicinal plants;
- conservation of biodiversity;
- research and development;
- intellectual property rights;
- production processes – conversion to traditional and modern dosage forms;
- safety, efficacy, quality, marketing and sales of herbal medicines;
- the rational and economic use of herbal medicines;
- the place of herbal medicines in health care; and
- training and registration of traditional healers.

In view of the wide spectrum of sectors and issues, it is natural that a large number of persons representing different groups and interests, coming from different countries around the world are involved in the various sectors and issues listed above. These include the following:

- indigenous people living in remote areas in Africa, Asia, Latin America and the small island states in the Caribbean and South Pacific. Herbal medicines are the only available health care for these people; they are the repositories of the knowledge of medicinal plants. Their lands are also the homes of medicinal plants;

- people living in rural areas in the developing non-industrial countries who have, for centuries, relied on herbal medicines for their health care;

- practitioners of traditional medicine;

- people living in developed countries and urban areas in developing countries who have begun to use herbal medicines;

- scientists involved in R & D related to traditional medicines;

- regulators in national governments who are responsible to ensure the safety, efficacy and quality of herbal medicines in the market;

- ministries of health which decide the place of herbal medicines and traditional practitioners in the national health service;

- pharmaceutical manufacturers, particularly in the larger multinational drug firms in developed countries who are producing and marketing herbal products as medicines and food supplements;

- international agencies which are involved in establishing international norms and agreements to control and regulate one or more of the different attributes of herbal medicines. These are:
  - World Health Organization (WHO);
  - United Nations Industrial Development Organization (UNIDO)
  - World Bank (WB)
  - World Wide Fund for Nature (WWF)*
  - United Nations Educational Social & Cultural Organization (UNESCO)
  - International Union for the Conservation of Nature (IUCN)
  - United Nations Environment Programme (UNEP)
  - Food & Agricultural Organization (FAO)
  - International Foundation for Science (IFS)
  - Nongovernmental organisations (NGOs)

A holistic approach to herbal medicines underscores the importance of recognising and addressing the needs of each of the different stakeholders and sectors involved. Quite often each stakeholder examines a particular sector in isolation ignoring the ultimate objectives. Consumers on the other hand, are concerned with each and every single sector/issue/activity in this long and complex chain.

Consumers see this workshop as one of the ongoing international initiatives to provide a forum for all the stakeholders to discuss and recommend ways and means to regulate and control nationally and internationally the use and abuse of herbal medicines. The ultimate objectives, from the consumer's point of view include, among others, the following:

- ensuring the availability, accessibility and affordability of safe and effective herbal medicines of good quality to all, **now and in the long-term future**, particularly to the people in those countries which are the homes of most of these medicinal plants and who are also the repositories of the knowledge of the plants;
- regulating the manufacture, trade, promotion, sales and use of herbal medicines to ensure the safety of consumers;
- defining the place of herbal medicines in primary health care;
- searching for new medicines among the many medicinal plants that are yet tapped;
- looking for, protecting and preserving endangered medicinal plant species;
- conserving biological diversity; and
- searching, protecting and preserving indigenous cultures which are the repositories of the knowledge of these plants.

*The World Wildlife Fund (WWF), set up in 1961, has now changed its name to World Wide Fund for Nature. The acronym remains the same – WWF.

2. Herbal medicines

The World Health Organization (WHO) has defined herbal medicines as **"Finished labelled medicinal products that contain as active ingredients aerial or underground parts of plants, or other plant material or combinations thereof, whether in the crude state or as plant preparations."**(1)

The same WHO document adds that **medicines containing plant material combined with chemically defined active substances, including chemically defined, isolated constituents of plants, are not considered to be herbal medicines.** It will therefore, follow that chemically defined isolated constituents of plants used in modern medicine are not herbal medicines. These constitute about 25 per cent of drugs derived from plants in modern pharmacopoeia (2). In 1985, the retail value of the plant derived drugs in the industrialised world was estimated to be at least $43 billion.(3) However if we take all the modern pharmaceuticals that are derived from natural sources (plant, animal or microbial), or are synthetic analogues of natural products or are developed based on structural analogues of natural products, these will constitute over half of the modern pharmaceuticals used in the US.(4)

Herbal medicines, as defined by the WHO, can be classified into three categories:

i. Phytomedicines or phytopharmaceuticals sold as over the counter (OTC) products in modern dosage forms such as tablets, capsules and liquids for oral use;

ii. Dietary supplements containing herbal products, also called nutraceuticals available in modern dosage forms.

These two types of herbal medicines are used by consumers in developed countries and those in urban areas of developing countries. These herbal medicines are gradually occupying increasing shelve space in modern pharmacies.

iii. Herbal medicines consisting of either crude, semi-processed or processed medicinal plants. These have a vital place in primary health care in developing countries.

For millions of people in the vast rural areas of developing countries, the use of herbal medicines is as common as the water they drink. These people have a very long tradition of using plants for medicinal purposes. There is a close relationship between humans and their environment. **It has been now confirmed by the WHO that herbal medicines serve the health needs of about 80 per cent of the world's population. The goal of Health for All cannot be achieved without herbal medicines** (5, 6, 7, 8 & 9). It is indeed paradoxical that in an era of molecular biology, genetic engineering, biotechnology computerised drug design and a global pharmaceutical market of over $300 billion per annum (10), herbal medicines serve the health care needs of 80 per cent of the world's population.

In addition to meeting the health care needs of a vast majority of people and providing the resource base for over half of our modern pharmaceuticals, some medicinal plant based products, though they have not become therapeutically useful drugs, have been instrumental as pharmacological tools to evaluate physiological and pathophysiological processes. **The following examples illustrate how plant based products have helped scientists to elucidate our understanding in key areas of physiology and pharmacology:**

- the cholinergic system: - atropine, muscarine, physostigmine, pilocarpine
- the adrenergic system: - ephedrine, reserpine, ergot alkaloids;
- the ganglionic junction: - nicotine, lobeline
- the neuromuscular junction: - tubocurarine
- the cardiovascular system: - cardiac glycosides, veratrum alkaloids; and
- the smooth muscle: - papaverine, xanthines.

Life-saving and essential drugs from medicinal plants such as morphine, digoxin, aspirin, emetine, and ephedrine were introduced into modern therapeutics several decades ago. However, herbal medicines, as defined by the WHO, and used for over a millenium in several countries, now refered to as the Third World, attracted scientific attention in the second half of the 20th century when previous colonies in Africa and Asia became independent and focused attention on their centuries' old traditional systems of medicine. It was only in 1978 that the WHO first recognised the role of herbal medicines and the traditional medical systems in providing basic health care for the majority of the world's population.(5)

Since then there has been a renewed interest in herbal medicines and traditional medical systems leading to an increased requirement of herbal medicines in developing countries with a change in the pattern of utilization. Traditional health systems and herbal medicines have been used mostly by the rural population. This is now changing particularly in Africa where due to macro-economic factors such as devaluation of currencies, and structural adjustment programmes, there is a substantial shift from modern to traditional medicine in the urban population.(11)

While the demand for herbal medicines is growing in developing countries, there is evidence that consumers in developed countries are becoming disillusioned with modern healthcare and are seeking alternatives: Between a third and half of the population in some of these countries use some form of complementary medicine, paying for it from their own pockets.(12, 13) There is, therefore, an increasing consumer demand for herbal medicines in developed countries. Annual sales growth rates of over 100 per cent for popular herbs such as ginseng, St. John's Wort, garlic, aloe vera, evening primrose oil and echinacea have been recorded on both sides of the Atlantic. In certain countries they are more popular than their prescription alternatives. For example, in Germany the value of prescriptions written for the anti-depressant St. John's Wort is twice that for Prozac, a top selling antidepressant. In 1994 the prescriptions for St. John's Wort were worth DM61 compared to Prozac which was worth DM30.(14)

However in both developed and developing countries, there are no integrated national policies on herbal medicines which will facilitate drug regulators, health administrators, health professionals including traditional and modern practitioners to regulate the market and ensure consumer safety and protection. **A national policy on herbal medicine should be designed to serve as an instrument to ensure that all herbal medicines in the market are safe, effective, of good quality, reasonably priced and are prescribed and utilised rationally.** There is, therefore, an urgent need for the preparation of model guidelines for developing national policies on herbal medicines. The major elements that should go into the proposed guidelines have been described and presented in a recent document by Consumers International.(14b)

With advances in biotechnology, plant molecular biology, cell culture and the availability of new, precise diagnostic tools for screening, the multinational drug industry in the North is showing renewed and heightened interest in South's plants. For example, in 1980, none of the US pharmaceutical industry research budget was spent on research

into higher plants. It has been estimated in the mid-1990s that over 200 companies and research organisations worldwide are screening plant and animal compounds for medicinal properties. It is conservatively estimated that the market for natural product research specimens within the pharmaceutical industry alone is $30-60 million per annum.(15) Medicinal plants and microbials from the South contribute at least $3 billion a year to the North's pharmaceutical industry.(16)

This lethal combination of increasing demands for herbal medicines by consumers in both developing and developed countries, renewed interest by the multinational pharmaceutical industry in bioprospecting and the lack of national legislation or effective international agreements on conservation of biodiversity, has resulted in "slaughter harvesting" of medicinal plants and massive depletion of biodiversity.

3. Source of medicinal plants: source of knowledge about medicinal plants

Plants have been used as medicine for millenia.(17) Traditional medicine is a summation of several thousands of years of human experience in the selection of plants and other natural products for preventive and curative purposes in health care. Among the earlies records available was the use of *Dichroa febrifuga* for the treatment of malaria by the Chinese emperor Shen Nung about 3000 B.C. The plant has been shown to contain an antimalarial alkaloid, febrifugine. The ancient Egyptian scripture, *Ebers papyrus* mentioned in 1500 B.C. the use of squill (*Drimia maritina*), as a cardiac tonic, a precursor of digitalis therapy.(18)

Out of an estimated 250,000-350,000 plant species identified so far, about 35,000 (some estimate up to 70,000) are used worldwide for medicinal purposes. About two-thirds of the total plant species grow in the tropics.(19, 20, 21)

The world's tropical rain forests, covering only six per cent of the earth's surface are home for at least half of all the world's plants. Fewer than one per cent of the tropical rain forest species have been examined for their possible use to humankind. But at least 1400 plant species of tropical forests are believed to offer potential cures for cancer.(22) Another estimate is that the tropical rain forests are the home to approximately 70 per cent of the million or so species of higher plants that are believed to inhabit the earth.(23) A World Bank study showed that four out of five medicinal plants utilised by humans are collected from the wild.(24) Yet another estimate suggests that of the total plant materia utilised in the preparation of traditional medicine, about 90 per cent is collected from the forest.(25) Tropical rain forest plants have been likened to "complex chemical storehouses". In these rain forests, the number of plant species per unit area is far greater than in other biomes; the plants in the rain forests are immobile compared to domesticated and cultivated plants. These plants in the forests have, therefore, to constantly compete with each other for their survival – the Darwinian theory of survival of the fittest. In response to this competition, these plant species are adapted to specialised environment often in the form of unique biocompounds in tissues for their defence.(26) This explanation underscores the critical importance of in-situ conservation (conservation in the natural habitat) as a source of continuous supply of planting material for propagation, re-introduction, agronomical and genetic improvement, domestication and for research and development.

Only about a third of the million or so species of higher plants have been identified and named by scientists. Of those named, only a tiny fraction has been studied. It is estimated that one in 125 plant species contains a useful pharmaceutical.(27) In Brazil

less than 10 per cent of even biologically active extracts have been investigated by modern scientists.(28) WHO published an inventory of medicinal plants in 1983 containing 21,000 plants. This includes species mentioned in official documents and publications from 91 countries.(29) A 1997 survey showed that up to date only about 10,000 species of medicinal plants have been investigated.(30)

Several important drugs used in modern medicine have come out of medicinal plants studies. Indigenious cultures, living close to these plants, use thousands of them in their medical practices. Many of these have not even been botanically named, let alone studied. Indigenous people know much more about the properties of these plants than modern scientists.(31) And researchers have now realised the truth of this. Between 1956 and 1976 the US National Cancer Institute screened over 35,000 plants and animals for anticancer compounds. The programme was terminated in 1981 because of its failure to identify a greater number of anticancer agents. A retrospective study conducted on the project concluded that the success rate in finding valuable species could have been doubled if medicinal folk knowledge had been the only information used to target species.(32)

It is generally accepted that about one in 10,000 chemicals derived from mass screening of plants, microbes and animals eventually results in a potentially profitable drug. By contrast, Shaman Pharmaceuticals Inc, the US based company that collects plants by talking to indigenous healers and watching them work, claims a success rate of 50 per cent. Shaman targets only those plants which are used by three different communities for medicinal purposes. With this formula, Shaman's researchers get positive results in 50 per cent of the plants brought in by their collectors.(33) **The linking of the indigenous knowledge of medicinal plants to modern research activities, therefore, makes them 5,000 times more effective than with random collection.**

Research scientists have found that 86 per cent of plants used by Samoan healers displayed significant biological activity when tested in the laboratory.(34) Crude extracts of plants used by one traditional healer in Belize gave rise to four times as many positive results in lab tests for anti-HIV activity than did specimens collected randomly.(35)

4. Loss of biodiversity: threat to medicinal plants

High degrees of natural forest cover are extremely important for the preservation of diverse species of medicinal plants. **There is evidence from studies reported by WHO, IUCN and WWF that rain forests are being depleted due to deforestation and habitat fragmentation – declining at an alarming rate of 16.8 hectares per annum.(36) Tropical forests contain the largest number of known medicinal plants. In addition, they are also the largest resource of cultural knowledge and experience in the use of these plants as medicines. A recent UNDP Human Development Report has pointed out that since 1970, the world's forests have declined from 4.4 sq. miles per 1000 people to 2.8! In the United States over 2,400 acres of native habitat is lost everyday. Many of the most important native medicinal plants, used by the first humans to inhabit North America, are threatened with extinction.**(37)

The velocity of global genetic resource degradation and depletion is both extra-ordinary and accelerating threatening species depletion of immense proportions.(38)

If the present trends of depletion continues, the World Health Organization, the International Union for Conservation of Nature and the Worldwide Fund for Nature estimate that by the turn of the century about 20,000 plants used in traditional

medicine as healing agents may have become extinct and by the middle of the next century, some 60,000 higher plant species may become extinct or near extinct (39, 40). Two recent World Bank reports on medicinal plants have also drawn attention to the same issues, namely the loss of medicinal plants.(41,42)

The negative impacts of commercial collection, harvesting and processing of medicinal plants causing tremendous short and long-term damage to both communities and eco-systems have been well documented. One well known example is a UNESCO report on the African plant *Prunus africana.*(43)

Many species of medicinal plants in the Himalayan forests are now in danger of extinction. In the late 1950s soon after reserpine was introduced as a therapeutic agent, Rauwolfia serpentina became almost extinct from the Himalayas. Now it is *Taxus baccata* which grows at 1600 meters above sea-level. The leaves of this plant yield taxol, an anticancer drug. Commercial collectors rape the forests and sell through middlemen at US$3.50 per kg to city based exporting firms. This species has disappeared from large parts of India and Nepal.(44)

Trade in medicinal plants is known as one of the least monitored, least regul: 1 and most secretive in the world. Medicinal plants are traded in the absence of tariff restrictions since most medicinal plants and crude drugs are exempt from duty.(45)

Over-exploitation of medicinal plants growing in the wild are major environmental protection concerns according to WHO, IUCN and WWF.(46) Non-sustainable harvest practices and rates can lead to losses of large numbers of individual plants within populations, to extermination of populations and eventually extermination of a species.(47)

A number of organisations in the US are actively engaged in supplying biological specimens from the tropical forests of Latin America to the pharmaceutical industry for further exploitation. This has been described under the title "Bio-prospectors Hall of Shame... **or Guess Who is Coming to Pirate your Plants.**"(47b)

- ***Pharmacogenetics of Bethesda,*** Maryland supplies biological specimens from the tropical forests of Latin America to pharmaceutical, chemical, agricultural and cosmetic companies. Pharmaco-genetics is partly owned by the Pan-Amer[illegible]n Development Foundation (PADF) a private voluntary organisation which [illegible]s provided technical assistance to indigenous and rural groups throughout Latin America for over 30 years. The company will use its link to PADF to organise plant identification and establish contacts with indigenous groups. Will these indigenous communities be fully informed that the non-profit PADF is also part owner of a *for-profit* commercial business that will collect thousands of biological specimens each year, screen them for special biological activity, and then isolate and obtain patents for the active compounds?

- ***Maxus Petroleum*** of Dallas, Texas is in the business of extracting not just petroleum, but also tropical plants from Ecuador's primary tropical forest. The company is building a 120-km road for oil exploration, and has contracted with the Missouri Botanical Garden to collect and catalogue plants it encounters along the way. Conveniently, the road traverses the Yasuni National Park and Waorani Ethnic Reserve. According to Maxus, 1,200 plant species have already been gathered, 18 of which are new to the scientific world, and 20 new species in Ecuador.

- ***Knowledge Recovery Foundation International*** of New York City proposes to develop a medicinal plant extractive 'library'. The foundation's long-term goal is to develop a well-documented, well-preserved library of plant extracts (including detailed information on local ethnomedical uses) that can be 'rented' to pharmaceutical companies for screening. According to the Knowledge Recovery Foundation, entries could be screened for a nominal fee of $25 to $50 per extract, and the Foundation will guarantee the re-collection of any sample which the company wants to investigate in more detail. **The Foundation proudly asserts that, "what the pharmaceutical companies are getting when they rent the extracts to screen is intellectual property, not material property."** Companies will be required to sign an agreement that, if a drug should be developed based on one of the collections furnished from the library, they will return a small royalty (0.1 to 0.2%) to the indigenous peoples of the country where the collection was made.

- ***Floating Bio-Pirates*: The Knowledge Recovery Foundation International** also proposes to purchase a rivergoing vessel with a 'mobile collection' laboratory. As the Foundation puts it, "This is preferable from a logistical point of view, in that it would enable collections to be made from any part of the Amazon that was accessible by river, and would not restrict us to working within a single extractive reserve."

The problems of loss of useful plant species arise only when a successful product has been developed and it cannot be synthesized. Enormous amounts of plant materials will then be necessary for commercial production of the product. The amounts of dried plant material required for the various stages of drug development beginning at initial screening and leading to the commercial production of a drug has been estimated.(49) These estimates are based on the assumption that the concentration of the active material is extremely low.

- Initial screening and isolation of a new chemical entity – 5 kg
- Confirmatory screens and initial development – 50 kg
- Additional research and development through clinical testing – 200 tons
- Commercial production of the drug – 200,000 tons per year.

5. Saving Lives by Saving Plants: Conservation of Biodiversity: International Initiatives

In 1978 the World Health Organization (WHO) and the United Nations Children Fund (UNICEF) came out with the Alma Ata Declaration with the goal of providing health care for everyone in the world by the year 2000. In support of that goal, WHO, UNICEF and the World Community endorsed traditional medicines programmes worldwide and underscored the important role of traditional medical systems in providing primary health care to 80 per cent of the world's population.(50)

In 1987, the 40th World Health Assembly adopted a resolution reaffirming the Alma Ata Declaration and gave two further mandates to the WHO:

i. Initiate comprehensive programmes for the identification, evaluation, preparation, cultivation and conservation of medicinal plants used in traditional medicine.

ii. Ensure quality control of drugs derived from traditional plant remedies by using modern techniques and applying suitable standards and good manufacturing practices.

As stated earlier, the vast majority of the world's population (estimates about 80 per cent) depend on herbal medicines for their primary health care. There is therefore an urgent need to ensure:

- Availability of safe and effective herbal medicines of good quality for all who need them; and
- Continuous supply of medicinal plants.

While scientists in universities and research institutes have focused their attention on screening medicinal plants for biologically active compounds and evaluating herbal remedies, little attention was given to conservation of biodiversity. This has resulted in serious genetic erosion, loss of biodiversity, extinction of several useful medicinal plant species threatening the continuous and regular availability of herbal medicines. The health care needs of more than four billion people, who depend on traditional systems of medicine, are in danger.

In response to this crisis, a large number of inter-governmental and international agencies have set in motion a series of initiatives to promote sustainable consumption and conservation of bio-diversity. **Biological diversity plays a pivotal role in the sustenance of life on earth as we know it.**

Sustainable consumption means the use of components of biological diversity in a way and at a rate that does not lead to long-term decline in biological diversity thereby maintaining its potential to meet the needs and aspirations of the present and future generations. [The United Nations Convention on Biological Diversity, Article 2, 1992]

International Initiatives

I. The Chiang Mai Declaration

"Saving Lives by Saving Plants", 1988

i. A major International Consultation on Conservation of Medicinal Plants organised jointly by the WHO, the International Union for the Conservation of Nature (IUCN) and the World Wildlife Fund (WWF) met in Chiang Mai, Thailand from 21-26 March 1988.
The Consultation issued the Chiang Mai Declaration, "Saving Lives by Sharing Plants", stating that the participants:

- recognise that medicinal plants are essential in primary health care, both in self-medication and in national health services;
- are alarmed at the consequences of loss of plant diversity around the world;
- view with grave concern the fact that many of the plants that provide traditional and modern drugs are threatened;
- draw the attention of the United Nations, its agencies and member State, other international agencies and their members and non-governmental organisations to:

  a. the vital importance of medicinal plants in health care;

b. the increasing and unacceptable loss of these medicinal plants due to habitat destruction and unsustainable harvesting practices;

c. the fact that plant resources in one country are often of critical importance to other countries;

d. the significant economic value of the medicinal plants used today and the great potential of the plant kingdom to provide new drugs;

e. the continuing disruption and loss of indigenous cultures, which often hold the key to finding new medicinal plants that may benefit the global community;

f. the urgent need for international cooperation and coordination to establish programmes for conservation of medicinal plants to ensure that adequate quantities are available for future generations.

II. Convention on International Trade of Endangered Species (CITES)

The principal tool for monitoring or restricting trade of species threatened by over-exploitation is the Convention on International Trade of Endangered Species – CITES which entered into force in 1975.(51) In October 1989 representatives from 91 countries attended the 7th meeting of CITES. Over 100 signatory nations agreed on an international treaty establishing a permit system to regulate trade in endangered species and in species at serious risk. Member countries are required to establish or designate scientific authorities to conduct non-detrimental studies for listed species, and management authorities to issue permits and certificates.(51b)

III. First World Congress on Medicinal and Aromatic Plants for Human Welfare

In July 1992, the First World Congress on Medicinal and Aromatic Plants for Human Welfare met in the Netherlands. The participants unanimously adopted the following conclusions and recommendations:

- At the same time as 80 per cent of the world's population depends on traditional medicine systems, chiefly herbal medicine, the accelerating need for phytomedicines, pharmaceutical drugs and other industrial applications has caused overexploitation of medicinal plants resulting in genetic erosion and threat of extinction of many source plants harvested in the wild.

- We recognise that the problems and solutions revolving around Medicinal & Aromatic Plants (MAP) genetic resources and conservation are complex.

- Responsibility for maintaining genetic diversity and utilisation of MAP on a sustainable yield basis lies with all the stake-holders involved including producers, suppliers, researchers, manufacturers and end users.

- The initiatives on genetic resources and conservation of biodiversity taken by several international organisations must be commended and intensified. We believe, the time has come to move beyond scientific discourse and discussion to implementation of meaningful solutions.

- We therefore call upon international funding and policy agencies, organisations and institutions to recognise and establish MAP genetic resources and conservation as a priority.

IV. The Convention on Biological Diversity (CBD)

The direct causes of loss of biodiversity are habitat loss and over-exploitation. Equally important are the complex social and economic development problems such as poverty, inequitable distributions of land, wealth and other benefits and illiteracy. These problems influence the ability of societies to use medicinal plants and other biological resources. The need to find solutions to the threats to biological diversity in the context of these problems led to the drafting of the UN Convention on Biological Diversity and Intellectual Property Rights signed by over 150 countries in Rio de Janeiro during the First Earth Summit in 1992. This Convention reflects a fundamental change in how the international scientific community perceives the environment and issues in human ecology. This international agreement entered into force in 1993.(52)

The CBD is the first international legal instrument to address biological diversity conservation and the sustainable use of its components comprehensively. Unfortunately, individual countries are still left with the task of developing viable policies that effectively promote bio-prospecting and sustainable development while protecting the rights and the cultures of local communities.(53)

V. The Arusha Declaration 1990

The South Commission organised an International Consultation of Experts from Developing Countries on Traditional Medicinal Plants in 1990.(54) The participants adopted the Arusha Declaration of 1990. This Declaration called for:

- A South-South Cooperation on Medicinal Plants;
- Exchange on medicinal plant methodology, herbal medicine production technology, medicinal plant conservation strategies and horticulture for commercial production of medicinal plants;
- Giving priority to the optimal utilisation of these plants in standardised form by the people of developing countries;
- Adequate intellectual property rights frameworks to protect community, national and regional knowledge on the use of medicinal plants against the unchecked profit making interests of the major pharmaceutical companies of the North;
- An emphasis on a promotional approach to the development of traditional health systems and the use of medicinal plants in health care.

VI. African Ministerial Conference on the Environment

Representatives from African nations gathered in Nairobi October 24-26, 1994 at the African Ministerial Conference on the Environment. Among other recommendations, the Conference proposed a **temporary ban on access to African biological resources until there are effective mechanisms in place to ensure fair and equitable sharing of benefits through the Convention on Biological Diversity.(55)**

VII. International Symposium on Herbal Medicine

There is growing concern about the abuse of herbal medicine, the need to protect consumers as well as to protect the indigenous people's right as custodians of knowledge and medicinal plants. There is also an urgent need to create greater awareness of the

potential and relative benefits and risks of herbal medicine. There is equal need for further research and development.

For this purpose, the International Institute for Human Resources Development at San Diego State University in co-sponsorship with the United Nations Industrial Development Organization (UNIDO) and in collaboration with a number of institutions convened an International Symposium on Herbal Medicine in Honolulu, Hawaii, June 1-4, 1997.

The Symposium came out with:

- Eight policy recommendations
- Fifteen recommendations for action; and
- Ten recommendations for research addressed to the various stake-holders.(56)

VIII. The Declaration of Belem, Brazil, July 1988

The International Society of Ethnobiology was established in July 1988 in Belem, Brazil. The society is devoted to promoting the study of how "... indigenous populations uniquely perceive, utilise and manage their natural resources as well as to the development of pr rammes that will guarantee the preservation of vital biological and cultural diversity."

The society adopted the following Declaration:
Declaration of Belem
22 July 1988

"As ethnobiologists, we are concerned that
SINCE
-- tropical forests and other fragile ecosystems are disappearing, -- many species, both plant and animal, are threatened with extinction, -- indigenous cultures around the world are being disrupted and destroyed;
and GIVEN
-- that economic, agricultural, and health conditions of people are dependent on these resources, - that native peoples have been stewards of 99% of the world's genetic resources, and – that there is an inextricable link between cultural and biological diversity. We, members of the International Society of Ethnobiology, strongly urge action as follows:
HENCEFORTH!

1) substantial proportion of development aid be devoted to efforts aimed at ethnobiological inventory, conservation, and management programs;
2) mechanisms be established by which indigenous specialists are recognised as proper authorities and are consulted in all programs affecting them, their resources, and their environments;
3) all other inalienable human rights be recognised and guaranteed, including cultural and linguistic differences;
4) procedures be developed to compensate native peoples for the utilisation of their knowledge and their biological resources;
5) educational programs be implemented to alert the global community to the value of ethnobiological knowledge for human well being;
6) all medical programs include the recognition of the respect for traditional healers and incorporation of traditional health practices that enhance the health status of these populations;
7) ethnobiologists make available the results of their research to the native peoples with whom they have worked, especially the dissemination of these in the native language;

8) exchange of information be promoted among indigenous and peasant peoples regarding conservation, management, and sustained utilisation of resources."

IX. *The 7th Asian Symposium on Medicinal Plants, Spices and Other Natural Products (ASOMPS), February 2-7, 1992, Manila, Philippines*

Nearly 300 scientists participated in the above symposium organised under the auspices of UNESCO in collaboration with the International Foundation for Science (IFS), the Asian Co-ordinating Group for Chemistry (ACGC) and other bodies in the University of Philippines.(57)

The scientists expressed concerns that:

- Plant samples from tropics where most Third World countries are located are collected in an "uncontrolled manner" and taken to Europe, Japan or North America for their drug value. The discoveries are then covered by patent laws granting exclusive rights and subsequent profits to the one who applies for it.

- The local botanists and foresters collect the plants without fully realising the potential value of the resource. Moreover the folk herbalists rarely get credit for the important scientific findings they often foster.

- The participants unanimously agreed that collection and export of all biological resources must be controlled.

7. Peoples' Guide to Herbal Medicines and Medicinal Plants

Several intergovernmental and international agencies have been sounding alarm bells during the last two decades to raise global awareness on the enormous extent of loss of biological diversity and threatened extinction of tens of thousands of valuable medicinal plants. Health professionals raised serious concerns on the lack of regulatory control of herbal medicines, nutraceuticals and dietary supplements promoted as drugs and abuse of herbal remedies.

The alarms, concerns and fears were based on critical analysis of enormous amounts of empirical data collected from around the world and data retrieved from published material. Remedial measures were carefully considered and rationally presented in the form of comprehensive conclusions and recommendations.

Some of these were presented as "Declarations". A good example is the Chiang Mai Declaration adopted by WHO, IUCN and WWF in 1988 – "Saving Lives by Saving Plants" underscoring the urgent need to conserve biodiversity if life has to continue on earth. A few outcomes became international legal agreements such as Convention on Biological Diversity (CBD) and Convention on International Trade of Endangered Species (CITES).

All the dramatic pleas and declarations are made to appreciative but docile audiences - scientists, research workers and international civil servants – preaching to the converted. The audiences have been ineffective in transforming the recommendations and declarations into scientifically sound public policies and enacted into appropriate national legislation. These people are no match for the vested interests who are depleting genetic resources threatening several plant species, promoting and marketing; thousands of

ineffective phyto-pharmaceuticals, nutraceuticals and dietary supplements. Sales of these "natural products" are skyrocketing.

The commitments made at international summits have turned out to be mere lip service and there is no evidence that any of the recommendations have been implemented.

The almost total inability of these international initiatives to bring about appropriate changes in public policies and national legislation is due to their failure to inform and educate the voting public thereby mobilising their support for campaigning and lobbying for changes in public policies. Information and education are the best weapons against ignorance which forces the general public into situations, which make them docile and accept whatever is given or told.

The history of humankind clearly illustrates that major changes in public policy are possible only through mass movements when the entire general (voting) public is sincerely convinced of the urgent need to bring in appropriate changes.

A series of international and regional initiatives in the form of conferences, seminars, etc, during the last two decades assembled an enormous wealth of empirical data. Based on a critical analysis of this data comprehensive sets of conclusions and recommendation, reached by consensus were presented. Unfortunately none of these were passed on to the general public to inform, educate and include them as one of the group of stakeholders. When the information including the conclusions and recommendations arrived at the various international summits and conferences are presented in a way they will understand, people will certainly rally round and support a campaign to implement the various resolutions reached by global consensus. This could be presented as a Peoples' Guide to Health Medicines and Medicinal Plants.

Peoples' Guide to Herbal Medicines and Medicinal Plants

A. Situation Analysis

- Health is a basic and fundamental human right. It is not a commodity in the market place.
- Inspite of the spectacular advances in modern medicine including genetic engineering, bio-technology, organ transplant, designer drugs, etc, the World Health Organization, since 1978 has repeatedly stated that 80 per cent of the world's population or over four billion people depend on traditional systems of healthcare.
- Medicinal plant lore or herbal medicine is a major component of traditional systems of healthcare.
- Medicinal plants are of vital importance in health care.
- Medicinal plants are essential in primary health care both in self-medication and in the National Health Service.
- There is increasing consumer demand for herbal medicines in developing and developed countries.
- Medicinal plants are a valuable global resource increasingly threatened by loss of habitat and over-exploitation. Increasing consumer demand aggravates the threat.
- Tropical rain forests are home to 70 per cent of the million or so species of highe plants that are believed to inhabit the earth.
- Less than one per cent of the plant species in the tropical forests have been investigated.
- Of the total plant material utilised in the preparation of traditional medicine, about 90 per cent are collected from the forest.
- Indigenous cultures living close to these plants use thousands of them in their medical practice. Many of these have not been even named, let alone studied.
- Indigenous people know more about the medicinal properties of these plants than modern scientists do.
- This knowledge is intellectual property. There is evidence that this community owned knowledge is pirated by multinational pharmaceutical industry and patented as privately owned intellectual property.
- There is a sprawling, unmonitored, unregulated and expanding trade in medicinal plants.
- Tropical forests are located in the developing countries, where the 80 per cent of the world's population, who depend on herbal medicines for their primary health care lives. It would, therefore, appear that these people would have a regular access medicinal plants. But, unfortunately this is not so.
- Tropical rain forests are being depleted due to deforestation and habitat fragmentation – declining at an alarming rate of 16.8 hectares per year.
- Since 1970, the world's forests have declined from 4.4 sq. miles per 1000 people to 2.8.
- In the United States 2400 acres of native habitat are lost everyday.
- There is a loss of biological diversity around the world. Many of the plants that provide traditional and modern drugs are threatened with extinction. This will have a major negative impact on the health of over four billion people.
- The conflagration of the tropical rain forest threaten not only the countless species of valuable medicinal plants, but also the cultures and individuals who know their properties and use them in their daily lives. What we are witnessing today makes the burning of the library in Alexandria look insignificant by comparison. It is as if the greatest medical library in the world is burning faster than we can read its contents which we have just begun to catalogue.(58)

- Conservation of medicinal plants currently lacks priority in public policies and national legislation.
- There are three aspects which are of critical importance to ensure the success of herbal medicines now and in the future:
  - ❖ Safety, efficacy and quality of herbal medicines.
  - ❖ Knowledge of medicinal plants;
  - ❖ Continued availability of medicinal plants;

B. Guidelines to Policy & Action

- National governments should encourage discussions among traditional healers, health professionals and the general public to formulate and develop public policies including regulations, which address the utilisation of traditional medicine in primary health care.
- International organisations, governments, NGOs, manufacturers and traditional healers need to develop ethical criteria for the promotion of traditional medicine and herbal remedies.
  International organisations, governments, traditional healers should examine the concept of a selection of a limited list of useful medicinal plants and a formulary of over the counter (OTC) phyto-pharmaceuticals for primary health care.
- Appropriate methods for the clinical evaluation of traditional and herbal remedies should be developed. These methods and criteria should not be limited to methods and concepts of modern biomedical science.
- Academic and research institutions, traditional healers, NGOs and community organisations should be supported by national governments to raise public awareness of the benefits and risks of traditional medicine and herbal remedies.
- Academic and research institutes, traditional healers, NGOs and community organisations should develop criteria for the establishment of priority list of existing herbal medicines for research and development.
- Academic and research institutes and traditional healers should consider the development of national pharmacopeial monographs on selected medicinal plants.
- There is an urgent need for international co-operation and coordination to provide assistance to developing countries establish programmes for the conservation of biodiversity so that adequate quantities of medicinal plants are available for future generations.
  Collection of non-cultivated medicinal plants from the wild should be encouraged only if the supply can be maintained and ecosystem damage does not result.
- International organisations, national governments, traditional healers, manufacturers and traders should develop international norms and agreements to monitor, regulate and control international trade in medicinal plants.
- Countries importing medicinal plants should have adequate facilities to ensure that supplies originate from sources that are biologically and socially sustainable.
- Knowledge of medicinal plants resides in communities rather than individuals. This knowledge is intellectual property. There is no provision in the TRIPs Agreement to confer rights and ownership of intellectual property to communities by awarding patents. An alternative suggested that in these instances intellectual property rights could be awarded as Traditional Resource Rights and recognised as such in national laws and international agreements. This will help developing countries to prevent the indigenous and community knowledge of medicinal plants from being pirated by the uncontrolled profit making interests of multinational drug companies.
- International agencies, national governments, academic/research institutes, NGOs, manufacturers and traders need to give priority in implementing the proposed codes of ethics in international trade and conservation guidelines for medicinal plants

contained in various international agreements such as the Convention on Biological Diversity, Convention on International Trade of Endangered Species, the Declaration of Chiang Mai, Declaration of Belem etc.

- The International agreements provide the mandate for national governments to enact appropriate policies and regulations for conservation, cultivation, processing and marketing of medicinal plants and to monitor the implementation of international agreements.
- These national instruments should be designed as a possible bridge linking together sustainable economic development, affordable health care and conservation of vital biological diversity.

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Herbal Remedies: Consumer Protection Concerns

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Contents

Tables

Summary, Conclusions and Recommendations

"Maintains Healthy Cholesterol: Reduces Total Cholesterol, Reduces LDL 'Bad' Cholesterol, Reduces Triglycerides and Increases HDL 'Good' Cholesterol."

"Suitable for migraine, weak heart, hernia, menstrual pain, kidney stones, rheumatism, sexual stress, impotence, frost-bite, internal and external cancer and infection."

The first claim appears on the label of Cholestin, a recently launched cholesterol lowering natural 'dietary supplement' in the US. The second is an advertisement for 'Tea of Longevity', a herbal tea, which appeared in a daily newspaper in Malaysia in 1995. A 150 mg pack of this herbal tea costs between 160-240 Malaysian Ringgits. This is equivalent to about 10 days wages of an unskilled worker in Malaysia.

These health claims have not been approved by the drug regulatory agencies in either country. They are addressed directly to the consumer and reflect the major concerns consumers have on the way herbal remedies are marketed. The extent of consumer concern is also evident from the fact that since 1990 the US Congress has received more mail on the regulation of herbal remedies than any other issues including Bosnia, the Gulf War, Somalia, gun control, tax reform and health care reform!

This paper describes the legal control, patterns of utilisation, and consumers perceptions of herbal remedies in selected countries. Based on the analysis of the empirical data obtained, some recommendations for assuring the safety, efficacy and quality of herbal remedies are suggested.

There is now documented evidence that people in both developed and developing countries are purchasing and consuming herbal remedies in increasing amounts. There is also evidence that some of the herbal remedies in the market are not safe, effective and of good quality.

To examine, study and analyse the utilisation of herbal remedies in developed and developing countries, it will be useful to classify herbal remedies into the following three categories:

i. Phytomedicines sold as over-the-counter (OTC) products in modern dosage forms;
ii. Dietary supplements, containing herbal products, in modern dosage forms;
iii. Traditional medicine, consisting of either crude, semi-processed or processed medicinal plants and herbs.

Phytomedicines and dietary supplements are used by consumers in developed countries and those in the urban areas of developing countries.

Traditional medicine, according to the World Health Organization (WHO) is believed to serve the health needs of about 80 per cent of the world's population. It is relevant to note that in the US because of the difficulty of approving herbs as OTC drugs and the limitations placed on health claims for dietary supplements, particularly for herbs, there is a suggestion to create a third category - traditional medicines.

In both developed and developing countries, there are no comprehensive integrated national policies on herbal remedies which will facilitate drug regulators and health administrators to regulate the market and ensure that all herbal remedies in the market are safe, effective, of good quality, of reasonable cost and are used rationally. A major recommendation follows from this conclusion - the need to recommend guidelines for developing national policies on herbal remedies. These guidelines can serve as a model to enable individual countries to develop their own national policies on traditional medicines and herbal remedies including appropriate legislation to provide legal support for the national policy to regulate the market.

The proposed guidelines should take into consideration the various consumer protection concerns identified in this paper so that appropriate components can be formulated to take care of these concerns.

1. A model legislation on traditional medicines needs to be developed. At present there seems to be as many approaches to regulating herbal remedies as there are countries. Some countries such as Australia and Germany have useful components in their legislations which may be incorporated into the proposed recommendations. The Japan Chinese -Medicine Manufacturers have developed voluntarily "Regulations for Manufacturing Control & Quality Control of Ethical Extract Products in Kampomedicine (Oriental Medicine) Formulations", a useful model for developing Good Manufacturing Practices (GMP) for traditional medicines.

2. It will be useful to have universally acceptable definitions for the various terms used such as herbs, botanicals, medicinal plants, herbal remedies, phytomedicines, dietary supplements, traditional medicines. In this context it is relevant to note the definition of a 'therapeutic good' in the Australian law which states "Any product that is likely to be thought to be a therapeutic good for any reason, most often because of advertising, dosage form or appearance."

3. Consumers are confused over tens of thousands of herbal remedies in the market. It will not be possible to formulate a national policy to regulate these tens of thousands of herbal remedies. Consumers want this symposium to debate the concept of a limited number of useful herbal remedies and traditional medicines. This could be at two levels:
   - Limited number of useful medicinal plants and herbs for use at the household level.
   - Limited number of phytomedicines and traditional medicines and
   - Development of a formulary of phytomedicines.

4. Herbs, which are in fact drugs, are regulated and sold as foods in several countries. Consumers are concerned that herbal products regulated as dietary supplements will not provide an adequate level of safety. Consumers ask for a pre-market safety review for plant derived products marketed as food supplements and compulsory post-marketing surveillance.

5. At present FDA can intervene only if there is evidence of injury to consumers by dietary supplements. Consumers demand legislation that can proactively regulate for safety but will never accept a legislation that provides for reactive safety regulation after evidence of injury has been proved.

6. There is no monitoring and control over advertising and promotion of herbal remedies in almost all countries. In some countries the regulation applies to media advertising and health claims on packages but no control over the promotional practices of medical representatives when they visit health professionals. Consumers ask for the development of an Ethical Criteria for Promotion of Herbal Remedies. This should also include promotional practices of medical detailmen and direct selling of health products to consumers.

7. Modern pharmacies stock herbal remedies and pharmacists are expected to make appropriate product selection to consumers. But at present there are no authoritative sources from where pharmacists can obtain relevant information on herbal remedies to advise consumers and other health professionals. Consumers request this symposium to examine how best to provide this information to pharmacists.

8. There is uncontrolled cross-practice. This means that practitioners not trained in a particular system prescribe and dispense drugs belonging to that system indiscriminately. This should be prevented by appropriate legislation.

9. Consumers propose that there should be self-regulation by appropriate professional bodies as well as state legislative control on the training, certification and registration of traditional healers and practitioners.

10. There is insufficient data on the per capita consumption of traditional medicines in developing countries. Estimates are available for Malaysia and the Republic of Korea. In Malaysia the per capita consumption of traditional medicines is more than double that of modern pharmaceuticals although traditional healers are not recognised in Malaysia and there is no formal system of traditional health care. In the Republic of Korea, the per capita consumption of traditional medicines is about 36 per cent more than that of modern drugs.

    Consumers consider that it will be important to carry out a cost/benefit analysis of herbal remedies and traditional medicine in a selected number of countries and make it available to consumers and health administrators.

11. Consumers in both developed and developing countries use both modern and traditional medicines simultaneously. But they do not provide this information to the prescriber or dispenser. There is a potential risk of adverse drug interactions. Increasing public awareness of the benefits and risks associated with the use of traditional medicines should be built into the components of a national policy on traditional medicines and herbal remedies.

12. There should be a structure and mechanism in place for an international alert system for rapid sharing of information on toxicity and adverse reactions to herbal products among drug regulators.

13. The paper concludes with an appeal for a new approach to the evaluation of traditional medicines.

    Consumers International Regional Office for Asia and the Pacific will be pleased to collaborate with UNIDO in following up on the recommendations that will be adopted by this international symposium.

1. Introduction

There are more effective, safe and good quality modern pharmaceuticals available today than ever before. However, it is paradoxical that consumers, particularly in the developed countries, are purchasing and using more and more herbal remedies.

There is now ample documented evidence that people in both developed and developing countries are purchasing and consuming herbal remedies and traditional medicines in increasing amounts. **There is also evidence that some of the herbal remedies in the market are not safe, effective and of good quality. This raises the issue of consumer safety.**

Consumers International (CI), a global federation of 214 organisations from 92 countries, representing consumers worldwide has consumer safety high on its agenda. CI is pleased to participate in this symposium, which will, among other issues examine consumer protection concerns.

What herbal remedies are the people in advanced industrialised countries such as the US and Western Europe and those in poor developing countries in sub-Saharan Africa and South Asia, consuming? The morbidity patterns are different and so is the pattern of utilisation of modern pharmaceuticals between developed and developing countries. What then is, the pattern of utilisation of herbal remedies and what are the consumer concerns in these countries?

To answer these questions and understand the issues it will be useful to classify herbal remedies into the following three categories:

1. *Phytomedicines* or *Phytopharmaceuticals* sold as over-the-counter (OTC) products in modern dosage forms such as capsules, tablets and liquids for oral use.

2. *Dietary supplements* containing herbal products, also called nutraceuticals, available in modern dosage forms.

These two types of herbal remedies are used by consumers in developed countries and those in urban areas of developing countries. These herbal remedies are gradually occupying increasing shelve space in modern pharmacies.

3. *Herbal remedies* consisting of either crude, semi-processed or processed medicinal plants and herbs. These remedies are available at two levels:

   i) Traditional beliefs, norms and practices based on centuries old experiences of trials and errors, successes and failures at the household level. These are passed through oral tradition and may be called, "people's health culture", home remedies or folk remedies. These have a vital place in primary health care in developing countries. A very good example was the universal availability of home made, cereal based oral rehydrating fluids in all cultures in developing countries till they were displaced by the commercial varieties of

oral rehydrating solutions which have been skillfully and aggressively marketed by the drug industry.

ii) A codified system of traditional medicine at the level of the traditional healer.

In the context of developing countries, consumer protection concerns cannot be realistically studied by examining herbal remedies in isolation. They should be taken together with traditional medicine. Traditional medicine includes the indigenous knowledge available in the community, the traditional healers and the means by which they provide health care, namely herbal remedies. Consumer protection and safety are closely related to herbal remedies, the prescribing practices of traditional healers and the health care systems in which they operate.

Having stated that the prescribing practices of traditional healers are also cause for consumer concern, it is also understood that this symposium cannot examine issues related to the training, certification and registration of traditional healers. However it will be necessary to reflect these concerns in the conclusions of the symposium. This will inform policy makers in developing countries to examine and develop appropriate policy measures to train, certify and register traditional healers and to regulate and control their professional practice.

In this paper the terms "traditional medicine" and 'herbal remedies' will be used interchangeably to describe the third group of herbal remedies used in developing countries.

It is also the term used by the World Health Organization (WHO), health administrators and policy makers in all developing countries. According to WHO, traditional medicine is believed to serve the health care needs of about 80 per cent of the world's population. The goal of Health for All by the Year 2000 cannot be achieved without traditional medicine. (1, 2, 3, 4, 5)

While there is a distinct difference between the patterns of utilisation of traditional medicine/herbal remedies in the developed and developing countries, consumer concerns are the same the world over. These include:

- Safety;
- Efficacy;
- Quality;
- Costs
- Unethical promotion; and
- Irrational use

of traditional medicine and herbal remedies.

Inspite of the fact that consumer concerns are the same in both developed and developing countries, international conferences that have been convened to study traditional medicines, herbal remedies and consumer protection concerns fall into two distinct categories.

For example, the July 1996 Open Conference on Botanicals for Medical and Dietary Uses: Standards and Information Issues, convened in Washington DC, July 7-9, 1996 looked exclusively at problems and prospects facing consumers in developed countries.

On the other hand, all international, regional and national conferences organised by the WHO and its Traditional Medicines Programme were confined mainly to the use of traditional medicine in developing countries. (1,2,3,4,5)

Consumers believe that sharing of information on consumer protection measures between developed and developing countries would be advantageous to both for the following reasons:

i) Developed countries have effective and efficient regulatory control over modern pharmaceuticals. These may serve as useful models to enact appropriate legislation to regulate herbal remedies;

ii) Developing countries have had several centuries of experience with the use of traditional medicine in health care. Developed countries may find this experience useful;

iii) Neither developed nor developing countries have an effective regulatory mechanism to ensure the safety, efficacy and quality of herbal remedies;

iv) Almost all herbal remedies marketed in developed and developing countries are OTC products, although some of these are known to be toxic;

v) In both developed and developing countries a herbal medicine, if marketed as food, is not regulated; but if the same product is marketed as a traditional medicine, it is regulated;

vi) In all developed and most developing countries, there are no systems, self-regulatory or otherwise, for the training, certification and registration of traditional healers or herbalists. Consumers have no guarantee that the traditional healers or the herbalists whom they visit to obtain health care have the necessary qualifications.

CI is pleased that this International Symposium will among other things examine consumer protection, and the use and abuse of herbal remedies in both developed and developing countries.

One of the objectives of this symposium will be to strengthen consumer protection and consumer safety in a well regulated market where safe and effective herbal remedies of good quality are available at affordable prices and are used rationally.

To achieve this objective, this symposium will have to recommend guidelines for developing national policies on herbal remedies which can serve as a model to enable countries to develop their own national policies on traditional medicine and

herbal remedies including appropriate legislation to provide legal support for the national policy to regulate the market.

Policy recommendations have to be based on a critical analysis of empirical data on traditional medicine and herbal remedies in developed and developing countries. This data will include:

i) Patterns of utilisation and consumers' perceptions of traditional medicines and herbal remedies;

ii) Existing legislation to control and regulate the herbal remedies market;

iii) Problems faced by countries in regulating the market;

iv) The marketing and promotional practices of the herbal drug industry;

v) The training, certification and registration of traditional healers and herbalists; and

vi) The role that traditional medicines and herbal remedies play in the overall health care services of a country in providing health care to its people.

This paper attempts to review the available data by describing the experiences of selected countries. And based on analysis of the data it suggests appropriate recommendations.

2. Regulation, patterns of utilisation and consumers' perceptions of herbal remedies and traditional medicines in selected countries

In the developed countries, consumers are making a deliberate choice in opting for herbal remedies. Their popularity is widespread in North America, Western Europe, Japan and Australia.

In the developing countries, on the other hand, a vast majority of the people use traditional medicines because modern health care services are not accessible, available or affordable to them.(1,2,3,4,5)

The worldwide market for phytomedicines was US$12.4 billion in 1994. (Table 1)

Table 1: Worldwide phytomedicine market, 1994.

Worldwide Phytomedicine Market, 1994 per Dr Grunwald, PhytoPharm, Phytotherapeutics market	
Country	Million US$ @ retail
European Union	6,000
Rest of Europe	500
Asia	2,300
Japan	2,100
North America	1,500
Total	12,400

Source: Brevoort, P. "The current Medical & Dietary Uses of Botanicals: A market perspective" in July 1996 USP Open Conference on Botanicals for Medical & Dietary Uses: Standards & Information Issues. Proceedings of the Conference. United States Pharmacopeial Convention Inc.

The projected phytomedicine annual growth for 1993-1998 is given in Table 2. Table 3 gives the percentage sales of phytomedicine categories in Europe, 1994.

Table 2: Projected phytomedicine annual growth rate expressed in percentage 1993-1998.

Region	Projected phytomedicine annual growth rate in percentage 1993-98
North America	12++
European Union	8++
Rest of Europe	12
Japan	15
South East Asia	12
India/Pakistan	15

Source: Brevoort P. op. cit.

Table 3: Percentage sales of phytomedicine categories in Europe, 1994

Therapeutic Category	Percentage of Sales
Cardiovascular	27.2
Respiratory	15.3
Digestive	14.4
Tonics	14.4
Hypnotic/sedative	9.3
Topicals	7.4
Other	12.0

Source: Brevoort P. op. cit.

International market prices of top-selling herbs have been published. Some of the more popular herbs such as echinacea and goldenseal sell for quite a high wholesale price of about $30-$50 per pound for their roots. There is at present a shortage of supply of these herbs. The 1996 echinacea crop had been sold before they were harvested. The 1997 crop was being negotiated in 1996. Some may want to try for futures on the 1998 crop. The most expensive herb in the world is wild Chinese ginseng. It sells for $1000 a gram and is traded in the market place.(6)

There is very little published data on retail prices of herbal remedies and how much consumers pay out of pocket for them particularly in developing countries. This information will be essential for health planners and consumer development workers.

Table 1 refers to the phytomedicine market only. As described earlier, herbal remedies could be divided into phytomedicines, nutraceuticals and traditional medicines. The American market for nutraceuticals is about one billion dollars. (7)

A study conducted by the US Food & Drug Administration (FDA) in 1994 showed that, of approximately 1600 respondents to a telephone survey, eight per cent said that within the past year they had used a herbal dietary supplement (Table 4).

Table 4: Prevalence of selected dietary practices in the US, 1994

Supplement use	Percentage not using/using
None	47
Any supplement	53
Vitamin/mineral supplement	42
Amino-acid supplement	06
Herbal supplement	08

Source: Brevoort P. op. cit.

2.A. *Developed Countries*

2.A.i. *Regulation of herbal remedies in the United States*

A 1993 study (8) revealed that Americans were becoming disillusioned with modern health care and were seeking alternatives. About 30 per cent of the adults in the US reported using at least one form of unconventional therapy in 1990 and made about 425 million visits to providers of unconventional therapy contrasting with 388 million visits to modern primary health care physicians.

The same study showed that about three per cent of Americans were using herbal medicines. The consumption of herbal medicines is increasing. A more recent poll of a little more than 1000 adults found that 63 per cent of them said that herbal products would be the answer to many common ailments or part of their daily routine or regime within five years.(9)

Consumer concerns regarding the regulation of herbal remedies in the US has been very well described by Loren D Israelsen.(10) The US FDA has not drafted specific policy statements or regulations to guide industry on safety or approval of herbs, good manufacturing practices or the use of scientific evidence to support proposed claims for herbal products. Over the past several years, the FDA has expressed concerns that herbs are in fact drugs and yet are sold as foods.

Dietary supplements

From a scientific standpoint, the claimed benefits of many of the dietary supplements are better evaluated in pharmacological rather than nutritional terms. Many of the herbal products are being sold as dietary supplements. While some of these consist of herbs traditionally used as food, many are made from plants that have no traditional food use.

Consumers are concerned that herbal products regulated as dietary supplements will not provide an adequate level of safety. Consumers ask for a pre-market safety review for plant derived products marketed as food supplements and compulsory post-marketing surveillance.

Herbal remedies are regulated by two Acts in the US. The more recent one is the Dietary Supplement Health and Education Act of 1994 (DSHEA). This legislation has been the focus of intense debate and consumer concern since the regulation for "health claims" for dietary supplements including herbs under the Nutrition Labelling and Education Act of 1990 (NLEA) became an issue several years ago. How much concern was felt by the consumers can be gauged by the fact that since 1990, the US Congress has received more mail on the regulation of herbal remedies than any other issue including Bosnia, the Gulf war, Somalia, gun control, tax reform and health care reform!(11)

Consumers are very much concerned with the new legal definition of dietary supplements given in DSHEA.(12)

Dietary supplements include:

- a vitamin
- a mineral
- a herbal or other botanical
- an amino acid
- other dietary substance to supplement the diet by increasing total dietary intake
- concentrate, metabolite, constituent extract or
- combination of the above ingredients

Consumers believe that this definition is not any better than no definition since an infinite number of permutations and combinations are possible considering the fact that there are several thousands of herbs and botanicals in the market. This is a pro-industry and anti-people definition of a dietary supplement which has opened the flood-gates!

One provision in the Act prohibits FDA from regulating herbs and dietary supplements as food additives. This brings into focus the FDA concern mentioned earlier namely herbs are drugs but sold as food and the consumer concerns that herbal products regulated as dietary supplements will not provide an adequate level of safety.

The FDA had tried to argue that some dietary ingredients are food additives and therefore require pre-market approval. The industry has opposed this and considers its dietary supplements as foods and therefore regulated as foods. Unfortunately for consumers, several federal courts have agreed with the industry and apparently the Congress agrees.(13)

Consumers view another provision in DSHEA with great concern. A new safety standard has been developed for dietary supplements. A dietary supplement will be deemed unsafe only if it presents a significant or unreasonable risk of injury or illness under the conditions of use on the label. And the burden of proof that a dietary supplement is unsafe rests on the FDA.(14) Consumers cannot understand how FDA can prove a product is unsafe and protect consumers if the agency is not allowed to evaluate the product but must wait until it has evidence that patients are injured by the product. How many consumers have to be injured before FDA can intervene? These are not hypothetical questions as revealed in a news item in the pharmaceutical journal, SCRIP.(15). The US FDA has been taken to courts. Pharmanex, a US marketer of plant based substances recently launched Cholestin as a dietary supplement in compliance with the Federal Food, Drug & Cosmetics Act. The claim on the Cholestin package states, "Maintains Healthy Cholesterol; Reduces Total Cholesterol, Reduces LDL "Bad" Cholesterol, Reduces Triclycerides, and Increases "Good Cholesterol". Pharmanex argues that these health claims fall within the acceptable structure/function claim in accordance with the Nutrition Labelling & Education Act and there is no claim for the treatment of a disease.

Pharmanex is suing FDA to obtain a declaration that Cholestin is a 'dietary supplement' and not a drug. The FDA's Centre for Drug Evaluation & Research wants to regulate Cholestin as a drug based on the labelling claim "reducing cholesterol" and its formulation (it contains HMG CoA reductase inhibitors, including a small quantity of a molecule, identical to that in Merck & Co's lovastin product, Mevacor).

In its law suit Pharmanex maintains that Cholestin should be classified as a natural dietary supplement under DSHEA because it contains food ingredients - Monascus purpureus Went yeast fermented on rice.

Under the DSHEA, as it stands now, FDA has no power to regulate dietary supplements. The agency must prove that patients have been injured by a product before it can intervene.(16)

Consumers will be watching this case with great interest to find out whether DSHEA is going to be pro-industry or whether it can be made to be more consumer-friendly.

Consumers demand legislation that can proactively regulate for safety but never accept an Act that provides for reactive safety regulation after evidence of injury has been proved.

Consumers are very much concerned about the potential dangers of herbal remedies that are being sold as dietary supplements and are often wrongly touted as being free of adverse effects. Since December 1993, dietary supplements containing ephedrine and related compounds have been implicated in approximately 800 reports of adverse effects, including at least eight deaths in the State of Texas alone.(17) That herbal remedies were not necessarily safe simply because they were natural was shown several years ago.(18)

The DSHEA has devised a statutory commission. One of the tasks of this commission is to prepare a report that evaluates how best to provide truthful, scientifically valid and non-misleading information to consumers so that they can make informed and appropriate health care choices for themselves and their families.

Consumers are concerned with the health claims made for dietary supplements. Health claims for dietary supplements - a statement of the relationship of a nutrient to a disease - are regulated by the Nutrition Labelling and Education Act of 1990 which was established in response to a wild proliferation of health claims that was occurring in the 1980s. It was estimated that in the first half of 1990, 40 per cent of new products that were released bore some type of health claim and many of them were not substantiated by science.(19)

But has NLEA helped the consumers to make informed choices by reading the labels on dietary supplements? For example, a structure-function claim for a feverfew product states, "Helps to maintain normal blood vessel tone" and talks about the active ingredient parthenolide which helps to normalise the fraction of platelets in the blood etc.(20) How many consumers can understand this complicated label and make informed and appropriate health care choices for themselves and their families?

It is the elderly who use herbal remedies and dietary supplements most. Studies done at a Senior Health Centre in New Mexico and at the University of New Mexico showed that herbal remedy use is prevalent among the elderly.(21) According to the American Association of Retired Persons Pharmacy Service, from Retired Persons Services, Incorporated (RPS), there has been a tremendous interest among the elderly on the use of natural products as dietary supplements. Consumers have been bombarded with product reports in all types of publications and advertisements, often with conflicting or confusing information. The RPS strongly believes that consumers should not be "guinea-pigs" for unknown product components. Outrageous health claims certainly go too far when they are attached to the following disclaimer. "This statement has not been evaluated by Food and Drugs

Administration. This product is not intended to diagnose, treat, cure, or prevent any disease."(22)

If this is the situation in the US with probably one of the best drug regulatory systems in the world - one that prevented thalidomide from getting registered - what is the plight of developing countries with very weak regulatory systems? This international symposium, will hopefully, provide answers.

Phytomedicines

Several herbal remedies are used by millions of consumers in America for a number of purposes, some of which are therapeutic. The annual market value of phytomedicines in 1994 was $1.5 billion. However there is no special Act under which phytomedicines can be registered. Herbal remedies, for minor self-limiting conditions, are registered under the OTC drug review process that began in 1972.

Many industrialised nations have developed regulatory models that provide for safety approval and proof of efficacy for many of their herbal products either based on:

- Evidence of traditional use; or
- Modern scientific information.

In 1991 a group of leading US and European phytomedicine companies formed the European American Phytomedicine Coalition (EAPC) and petitioned the US FDA for European marketing histories for botanical ingredients to be eligible for inclusion in the OTC drug review process that began in 1972.(23)

The European regulatory models accept histories of traditional use of herbal remedies as evidence of safety. These are called old drugs and are subject to a more lenient approval process. **There is, thus, an enormous legal difference between new and old drugs in Europe. This is not the case in the US.**

European phytomedicine companies have been unable to sell in US as drugs, herbal remedies regulated as medicines in their countries. It was to overcome this barrier that EAPC had petitioned the US FDA to accept European marketing approval. Upto 1996, the FDA has not responded.

The constraints to registering herbal remedies as OTC drugs and the limitations placed on health claims for dietary supplements, have led many to suggest that the US should develop appropriate legislation to review and approve herbal remedies as legitimate OTC drugs. **The American Herbal Council, the Herb Research Foundation and the Americal Herbal Products Association support a separate traditional medicines category in addition to dietary supplements in order to arrive at a more rational framework for the regulation of herbal remedies (24, 25).**

American consumers' concerns are not limited to the safety, efficacy and quality of herbal remedies. Equally distressing is the communication and information vacuum that surrounds herbal remedies. Seven out of 10 consumers who use

herbal remedies do not tell their primary care physicians that they are taking them; presumably they do not tell their pharmacists either.(26) Critical information essential for prescribers and dispensers to be forewarned about possible drug interactions are withheld.

Consumers may not be telling their physicians either because the latter do not ask them or because consumers are under the mistaken belief that herbal products are not medicinal products but dietary supplements.

Consumers do ask their pharmacists. In fact, 74 per cent of pharmacists are asked about herbal remedies. This was revealed in a recent survey by Texas Pharmaceutical Association. Often their answer was very simple - "I do not know!"(27)

From a consumer point of view the pharmacist's role in providing objective information is vital. They stock herbal products and are expected to make appropriate product selection for consumers. Pharmacists therefore need to be adequately knowledgeable on the safety, efficacy and quality of herbal products. They also have to provide information to other health care professionals. At present there are no authoritative sources from where pharmacists can obtain the relevant information. Consumers look forward to this symposium to find appropriate solutions to this concern of consumers.

2.A.ii. *The United Kingdom*

As in the US, many people in the UK use herbal remedies for minor self-limiting conditions. The failure of modern medicine to cure and anxiety about their potentially serious unwanted effects have led some to turn to herbal remedies for the treatment of more chronic and disabling conditions as well often in the (mistaken) belief that time-honoured natural medicines must be safe.(28)

The Medicines Act of 1968 initially exempted herbal remedies from licensing requirements and did not restrict their supply. Subsequent legislation recognised that certain plants and herbs had powerful pharmacological effects and restricted their sale and supply to pharmacies while still permitting prescribing herbalists to use some of them within specific dosages.(29)

In the 1980s about 5,500 herbal products were available either as pharmacy medicines or on the general sales list. Of these about 1000 products derived from 550 herbs were estimated to be on the market with product licences of right. The Committee on the Review of Medicine (CRM) were examining them. Assessment of their safety, efficacy and quality was difficult. Few herbal remedies have been evaluated by clinical trials. CRM had decided to accept bibliographic evidence of efficacy even where this is only an appropriate reference in a herbal pharmacopoeia.(30)

Medical herbalists choose and prepare medicines and accept responsibility for their recommendations. Herbalists can practise without a formal qualification but a few are also medically qualified.(31) However, relatively few people consult a medical

herbalist. Some go to pharmacies but health food shops and department stores are the main sources from which consumers buy their herbal remedies often selecting them with no qualified advice.(32) Supply of herbal remedies by mail order is also increasing and this accentuates the problems of unsupervised self-medication.

2.A.iii. *Germany*

The Commission E of Germany, which is considered to be the leader of the industrialised nations in evaluating herbs, employs criteria that include long term, traditional and historical use. However, documentation by some type of modern scientific data - chemical, toxicological, pharmacological, clinical, epidemiological or case history - is required to confirm the safety and efficacy of the long-term use of herbs. The Germans have what has been called a "doctrine of reasonable certainty" which is the criterion they use for determining the efficacy of a herb, but they go by a "doctrine of absolute certainty" with respect to safety. So while safety is not a negotiable issue, efficacy is reviewed using a more relaxed standard.(33)

Herbal remedies, called phytopharmaka, are registered under the medicines Act-Arzneimittelgesetzs - and are allowed to make health claims and indications for use on the labels. There are in addition, other herbal products, not registered as drugs; they cannot make any health claims.

The total number of registered medicinal drugs in Germany is about 50,490. Of these about 6080 or 12 per cent are herbal phytopharmaka. Majority are OTC products; some can be dispensed by prescription only. In addition to phytopharmaka, there are about 6900 registered homeopathic drugs which may include herbal ingredients. These are also allowed to make health claims and state indications for use on the labels. Yet another group of drugs are a combination of modern chemical substances and herbal ingredients. In addition to these herbal remedies which are registered as drugs, there are herbal products which do not make any health claims and are used as foods and drinks. These are not controlled by the Medicines Act. Practitioners of modern medicine prescribe herbal medicines which are paid for by the social health insurance. However, they do not have any specialised training in prescribing phytopharmaka. A recent review showed that in 1970, 52 per cent of all Germans used phytopharmaka; a survey done in 1997 revealed that 70 per cent use phytopharmaka now.(34)

Table 5 gives the pattern of utilisation of modern and traditional herbal drugs in Germany, for three commonly used therapeutic categories of drugs in 1995. Defined daily doses (DDD) of the modern and traditional medicines of each therapeutic category are given.

Table 5: Patterns of Utilisation expressed in DDD of modern and traditional herbal remedies of three commonly used therapeutic classes of drugs in Germany in 1995

Therapeutic category	DDD in millions 1995	Percentage change in 1995 over DDD in 1994	Cost in Marks per DDD	Total cost in Marks (Millions)
Modern psychotropics	966.3	+ 2.5	1.5	1413.8
Herbal psychotropics	167.9	+33.0	1.0	167.9
Modern cardiac glycosides	676.8	- 5.3	0.23	157.7
Herbal cardiac glycosides	192.8	+ 6.8	0.67	129.0
Modern immune therapy drugs: liposaccharides & oligosaccharides of bacterial origin	12.0)	+ 5.5	1.29	64.4
Homeopathic immune therapy drugs: mostly herbal	38.0)			
Herbal immune therapy drugs	58.2	+28	1.44	83.8

Source: Monika Scheffler, BukoPharma Kampagne, Bielefeld, Germany, Ref. 33.

Psychotropics and cardiac glycocides are essential, prescription only drugs; cardiac glycocides are life-saving drugs; an advanced industrial country and the home of one of the biggest multinational drug company, Hoechst, is going back to traditional medicines for treating major and life-threatening illnesses. The annual increase in the utilisation of herbal psychotropics was 33 per cent compared to three per cent for modern psychotropics. Herbal cardiac glycocides are three times more expensive than modern cardiac glycocides. Yet the utilisation of herbal glycocides has increased while that of modern glycocides has decreased. It is relevant to note that ACE inhibitors are being increasingly used in the management of heart failure. Inspite of this, the use of herbal cardiac glycosides has increased.

Immune therapy drugs are non-essential. Their efficacy has <u>not</u> been proved. Preparations of liposaccharides and oligosaccharides of bacterial origin - brand names Broncho-Vaxom, Symbioflor I and Luivac - constitute the 12 per cent "modern" drugs.'

A single plant medicine marketed to increase cerebral circulation achieved a turnover of 120 million pounds (about DM280 million) in 1989. Germany has been described as the Garden of Eden for herbal remedies.(35)

2.A.iv. *Japan*

Traditional medicines in Japan are based on traditional Chinese medicines introduced into Japan more than a 1000 years ago. The Pharmaceutical Affairs Division of the Ministry of Health & Welfare issued new regulations in 1985 setting quality control standards for ready to use traditional drugs. Traditional drugs of standard quality became available on the market a year later. They are used by more than 40 per cent of the physicians in their routine practice.(36) More than 100 kinds of traditional medicines (Kampo drugs) have been placed in the national health insurance scheme. The government is increasingly recognising traditional medicine. There has been multisectoral research on herbal medicine and acupuncture funded by the Japan Science and Technology Agency.(37)

Quality assurance requires specifications and test methods employed in the major phases of production: raw materials, the extract, and the final dosage form, e.g. tablet, capsule, granules, etc. In assessing the safety and efficacy of traditional medicines, two broad approaches are used. For medicines that have been used over a long time in Japan, safety and efficacy are accepted because of the long history of uneventful use. Therefore for this category, no data demonstrating safety and efficacy need be submitted. On the other hand, other products that have been recently introduced, e.g. new formulations, should be treated as any new pharmaceutical product. For these, data are required to demonstrate safety and efficacy, including data on clinical trials. The Good Manufacturing Practices (GMP) for traditional medicines were developed voluntarily by the Japan Chinese - Medicine Manufacturers Association. It is known as "Regulations for Manufacturing Control & Quality Control of Ethical Extract Products in Kampomedicine (Oriental Medicine) Formulations.(38)

2.A.v. *Australia* (39)

Prior to 1991, there were no Commonwealth Controls exercised over herbal products which were, at that time, often treated as foods. In 1989 a new Therapeutic Goods Act (TGA) was passed by parliament (replacing the old 1966 Act).

Requirements for herbal medicines

Herbal products are recognised as medicines where they meet the definition of a 'therapeutic good'. This includes:

- Anything used for the prevention, treatment or diagnosis of diseases and other bodily conditions in humans or animals; and
- **Any product that is likely to be thought to be a therapeutic good for any reason, most often because of the advertising, dosage form or appearance (emphasis mine).**

All medicines supplied in or exported from Australia must:
- first be approved by the TGA
- be made by a manufacturer with an acceptable standard of good manufacturing practice (GMP)
- comply with relevant standards, for example: labels, advertising, raw material

standards, finished product liability, tablet disintegration.

All products are assessed for basic safety and quality. Further evaluation to consider the safety in more detail and efficacy of the product is required if there could be some risk to the consumer.

Herbal and traditional medicines are evaluated by the Traditional Medicines Evaluation Committee (TMEC). Where herbal medicines are eaten or made into teas only for nutrition or flavour, these would be considered to be foods, not medicines. Where herbal products are made solely to moisturise or cleanse the skin, these would be considered to be cosmetics, not medicines.

Medicines made by herbalists (and other practitioners) for individual patients following a consultation are exempted from controls in the Act, but these medicines should meet acceptable standards. The standard of professional practice by herbalists (and other practitioners) is controlled by States & Territories.

Medicines in Australia fall into one of the following three groups:
- Registrable medicines;
- Listable medicines; and
- Exempt medicines

Registrable medicines

Prescription drugs, OTC drugs and other medicines where safety and efficacy need to be considered must pass through the "Registration" process before approval. In addition, the standard of the manufacturer must be acceptable. Where a product is approved for Registration, a *Certification of Registration* is issued.

In the case of herbal medicines, full evaluation (Registration) is required if:
- the product contains a substance that is a scheduled poison, e.g. certain toxic herbs;
- the product contains an active ingredient from an animal or mineral source where this ingredient is not permitted in the "Listed" products;
- the product is to be used for a serious condition which should be monitored by a practitioner or the product needs to be sterile e.g. eye drops and injections.

TMEC will, at its discretion, accept evidence of established traditional use as proof of efficacy. Where there has been a long period of safe use, only limited toxicological data is required.

Listable medicines

Low risk medicines - mostly herbal medicines, vitamin and mineral products, sunscreens and some homeopathic products - go through the "Listing" process before approval. These products are assessed for quality and safety. To ensure safety, only certain ingredients are allowed in these products. For some ingredients, only a safe

dose or a particular route of administration is allowed. The standard of the manufacturer must be established as acceptable.

Proof of efficacy is not usually requested, although the product sponsor is required to hold this information as a condition of Listing. Where a product is approved for "Listing", a *Certificate of Listing* is issued. Information about registrable and listable medicines is stored in the Australian Register of Therapeutic Goods (ARTG) database.

There are over 1, 500 different herb species in the medicines being supplied in Australia. Most herbs are permitted to be included in "Listed" products. It is estimated that two-thirds of "Listed" products in the Australian Market contain one or more herbal ingredients. There are approximately 400 "Listed" products imported from China.

About 27,000 Registered and Listed medicines are supplied in Australia. A quarter of them are manufactured overseas.

ARTG - Exempt medicines

Minimal risk medicines do not need to be evaluated or assessed prior to marketing. Suppliers of raw materials do not need to apply for approval to sell the material to practitioners and other manufacturers who use the material to make a finished product. Medicines made by herbalists (and other alternative medicine practitioners) for individual patients following a consultation do not need a TGA approval before being sold to the patient. Most homeopathics are exempt. Details of raw materials, practitioner dispensed products and most homeopathic products are not stored in the Australian Register of Therapeutic Goods.

Advertising to the public

In most cases, medicines cannot be advertised to the public for serious conditions that require supervision by a trained practitioner. The *Therapeutic Goods Advertising Code* sets out conditions that may not be mentioned in advertisements to the public.

These restrictions do not apply to communication between a practitioner and patient and also do not apply to information in books and journals.

Hundreds of tonnes of illegal herbal products are seized each year in Australia. But compared with the total trade in herbal medicines, the authorities are confident that high standards are maintained in Australia.

2.A.vi. *Adverse reactions to herbal remedies reported in developed countries*

There is a long list of medicinal plants that are toxic to the liver.(40-43) Germander has been used with apparent safety for centuries. It was in the early 1990s, that germander was first identified as a hepatotoxic drug.(44) In May 1992, all preparations containing germander were withdrawn from the market and banned in

France. ..is lead was not followed in Canada, where the first two cases of hepatitis were reported recently.(45)

Four cases of acute hepatitis attributable to single plants or mixtures were reported in British patients taking vallerian and scutellaria.(46) Valerian is one of the top selling herbs in the US.(47)

In Belgium 70 cases of renal impairment attributable to preparations based on Chinese plants were recently reported.(48)

A neonatal death where a mother had been drinking herbal tea was reported in 1988.(49) The mother had regularly taken an infusion based on 10 different plants during the pregnancy. A causal link with herbal tea is difficult to establish but this calls for caution during pregnancy.

One research field that has been neglected and poorly studied is the potential interaction between herbal remedies and modern pharmaceuticals.(50) This is another consumer concern since many people both in developed and developing countries take herbal remedies and modern drugs together and do not reveal this to their physicians or pharmacists.

2.B. *Developing Countries*

Traditional systems of health care and herbal remedies were freely available in developing countries for several centuries. The WHO came into existence in 1948 as the international agency mandated to ensure a healthy world. Several programmes were initiated. However, it was in 1976 that WHO decided that traditional healers and midwives, previously seen as an obstacle to progress, must play their part.(51) The Traditional Medicines Programme under a Director was set up in 1978. Consumers were told, among other things that:

- The goal of Health for All by the Year 2000 cannot be achieved without traditional medicine;
- Without traditional medicine most Third World people would have no medicines at all;
- Traditional systems of health care provide primary health care to about 80 per cent of the population who have no regular access to modern health care services.

These statements bring into focus a major consumer concern. What is WHO's policy on traditional medicine? Does the WHO consider traditional medicine as merely a substitute for modern medicine when the latter is either not accessible, available or affordable to the poor in the Third World? Or is traditional medicine a valid health technology in itself?

In the mid seventies, it was estimated by the WHO, that about 80 per cent of the world's people had no access to modern health care. As recently as 1993, it was reported by the Director of the WHO Traditional Medicine Programme that 80 per

cent of the world's inhabitants rely chiefly on traditional medicines, mainly plant based, for their primary health care needs.(52) It is difficult to understand how this precise numerical value was arrived at and the particular research methodology used to determine it. However it must be taken as authoritative since it was given by the Director of WHO Traditional Medicine Programme. It is relevant to note that this figure fits very well with the other side of the coin. More than 80 per cent of health budgets in developing countries are directed to services that reach approximately 20 per cent of the population.(53) This figure refers to modern health services. **It would therefore appear that whether in the seventies, eighties or nineties, according to the WHO, 80 per cent of the world population depended on traditional medicine because modern health care was not accessible, available or affordable to them. Consumers want an explanation why there was no improvement inspite of the enormous resources WHO had put into its several programmes. But this Symposium is not the forum to bring up this issue.**

2.B.i. *WHO, developing countries and traditional medicines*

In 1978 the Traditional Medicine Programme was set up. A WHO Report (54) proposed that traditional medicine should be integrated with primary health care. This integration, the report stated, "offered the best means of achieving the goal of Health for All by the Year 2000". In September 1987, the Regional Director of the Western Pacific Region stated that while the WHO programme on traditional medicine made considerable progress in acupuncture, not much has been achieved in herbal medicine.(55) In November 1987 the Director-General of WHO deplored the fact that recognition of traditional medicine in the Member States was still low. He added that the safety and efficacy of traditional medicine have not been fully validated; its rational use had still to be defined.(56)

In 1993 the second evaluation of the implementation of the global strategy for Health for All by the Year 2000 was published for the South East Asian Region. In this report there was a brief mention of traditional medicine in only two countries, Mongolia and Myanmar, out of a total of 11 countries in the region.(57) In 1995, the WHO Report "Bridging the gap" was published. The report had 118 pages. But only a small fraction of one page out of the 118 pages was devoted to the topic of traditional medicine. However, the report stated that traditional medicine continued to be an important part of health care in many developing countries; but admitted that traditional medicine had not been integrated into most national health care systems.

What the WHO had failed to do in the Member States - inability to integrate traditional medicine with the modern health care systems - it has succeeded in its headquarters in Geneva. The Traditional Medicine Programme has been integrated with the Essential Drugs Programme. The post of Director, Traditional Medicine has been reduced to that of Medical Officer who works in the Essential Drugs Programme. The current budget for traditional medicine is in the region of $180,000 per annum. This sum includes the salaries of the medical officer and the secretary, travel and grants for traditional medicine activities.(58)

This scaling down of the Traditional Medicine Programme is a cause for serious consumer concern as it means that the recognition of traditional medicine as a health technology which needs to be promoted and strengthened in developing countries is given a low priority by WHO. This is all the more disturbing since the Director General of WHO had stated that the safety and efficacy of traditional medicine have not yet been fully validated. Providing technical assistance to developing countries so that they can ensure the safety and efficacy of herbal remedies which consumers use is the sole responsibility of the WHO.

Consumers, therefore, look to UNIDO and this symposium with great expectations.

2.B.ii. *Consumers' perception of traditional medicine*

While there is a fair amount of published evidence that consumers in developed countries are turning more towards using traditional medicine, there are no recent reports that have studied consumer perception of traditional medicine in developing countries.

Prof. D. Banerji, formerly of the Jawaharlal Nehru University of New Delhi, in one of his early studies in the 1950s, reported on the perceptions of traditional medicine in the rural population in North India. One of the items in the questionnaire he used was, **"If you have enough money and easy access to both the traditional and modern systems of medicine, which one will you choose?" The vast majority of the respondents opted in favour of the modern system.(59)**

Both modern and traditional medicine are equally accessible and available in China. A study reported in 1978 described the incorporation of traditional medical practice into the organised health care system taking as an example the health care services in Toushan, a community with a total population of 57,934.(60)

It was left to the people in Toushan to choose between modern and traditional systems both of which were freely available. In 1977 the ratio was 7:3 in favour of the modern system.

It was also estimated that nearly 70 per cent of the medicinal materials consumed by the commune health clinic were modern pharmaceuticals.

It appears that people in China and India prefer modern medicine to traditional medicines. Very rough estimates for the utilisation of traditional medicines in the Asia Pacific region vary from about 35 per cent in Sri Lanka to over 75 per cent in Nepal. However, it is important to remember that there is no exclusive use of traditional medicine by one section of the population and modern medicine by another. **A vast majority of consumers in developing countries use both, modern and traditional medicine; they may also take them simultaneously but do not tell this to their physicians.**

They may be self-medicating with an OTC herbal remedy, a herbal dietary supplement or taking traditional medicine prescribed by a traditional healer. As in the developed countries, there is a perception in developing countries that, because they are "natural" and have been used with apparent safety for several centuries, herbal remedies are always safe.

2.B.iii. *Malaysia and Pakistan*

Regulatory systems for the control of traditional medicine vary widely among developing countries. Malaysia, for example, introduced the Drugs & Cosmetic Control Act (1984) to regulate and control traditional medicine.(61) Only those preparations that are processed and presented in modern dosage forms such as tablets, capsules and oral liquids will be subjected to evaluation, approval and registration. Raw materials such as seeds, or any parts of plants will not be registered.(62) These will include herbs sold as food or drinks such as herbal teas which are not regulated. For example, the advertisement for "Tea of Longevity" states, "suitable and beneficial to many ailments including migraine, weak heart, hernia, menstrual pain, kidney stones, rheumatism, arthritis, sexual stress, impotence, frostbite, internal and external cancer and infections". A retail pack of 150 mg costs between 160-240 Malaysian Ringgits (US$62-96).(63) This is equivalent to 10 days wages of an unskilled worker in Malaysia.

The mandatory registration of traditional medicines is not intended to give recognition to traditional healers, who are not recognised in Malaysia.(64)

Consumers' safety in Malaysia, therefore depends on the control of traditional medicines in the market through a system of evaluation, approval and registration. Traditional healers are not recognised and are not held responsible for the safety of the medicines they prescribe and dispense.

A problem faced by the drug regulatory authority in Malaysia is the enormous work involved. Several thousands of traditional medicines have been submitted for approval. It will not be possible with the available resources to evaluate all of them for safety and quality and to continue to monitor them in the market.(65)

The annual market for traditional medicines in Malaysia is approximately US$800.(66) This is more than double that of the market for modern pharmaceuticals which is about US$350.(67)

In Pakistan, on the other hand, all traditional healers are registered by the Ministry of Health. They are responsible for the safety, efficacy and quality of the medicines they prescribe and dispense. There is no regulatory control of traditional medicines.(68) Not all the traditional medicines consumers use are purchased from the traditional healers. **Regulating the traditional healers and not the traditional medicines will therefore, not ensure consumer safety.**

2.B.iv. *Vietnam*

The use of traditional medicines in Vietnam is regulated and controlled in two distinct ways.(69):

i. The use of compounded herbal remedies is controlled primarily by mandatory registration of practitioners. Each traditional practitioner needs permission from the Provincial Health Service to dispense and sell herbal remedies and they are responsible for the safety and quality of the products they prescribe.

ii. A small number of herbal remedies of proven safety and efficacy are permitted to be manufactured on an industrial scale. All manufactured products must be registered by the Ministry of Health. Provisional registration is accorded in the first instance and remains valid for one year.

In 1976, the Ministry of Health promulgated a pharmacopoeia which included monographs on medicinal plants. A formulary which promotes the rational use of essential drugs for primary health care and in which both modern essential drugs and medicinal plants are mentioned, has been compiled and published with WHO support.

A national workshop in November 1986 reported on the successful application of traditional medicine in the fields of internal medicine, surgery, gynaecology and ophthalmology.(70) Vietnam is perhaps the only country where modern and traditional medicine, merged in medical education, are jointly practiced within a single health service.(71)

2.B.v. *Thailand*

The Ministry of Health promotes the use of 66 traditional medicinal plants in primary health care (PHC). This is based on the scientific evidence of efficacy of these plants as well as on traditional patterns of utilisation. The Ministry of Health also promotes the use of traditional medicine in state-run hospitals and health service centres. The Fourth Public Health Development Plan (1977-81) stated the country's general policy to promote the use of traditionally used medicinal plants in PHC. The Seventh Plan (1992-1996) promotes the integration of traditional Thai medicine into community health care and gives priority to research into medicinal plants.(72)

The most effective use of traditional herbal medicines in PHC in Thailand is their role in self-medication. Most Thais in rural areas treat themselves first before seeking help from either modern or traditional medical practitioners; herbal medicines offer a low cost intervention in the early treatment of disease. **What is important to recognise is that this practice of self-medication with herbs provides a much safer alternative to the serious problem of self-medication with inappropriate doses and various combinations of harmful drugs which are freely available.(73)**

Table 6 gives the pattern of health care service utilisation in Thailand in 1970, 1979 and 1985.

There is a definite shift away from traditional practitioners to modern health facilities inspite of the government's policy of promoting the use of traditionally-utilised medicinal plants.

There is also a fall in the percentage of the population resorting to self-medication.

Table 6: Pattern of utilisation of health care services in Thailand, 1970, 1979 and 1985 expressed in percentage.

Source of Health Care	Percentages		
	1970	1979	1985
Take no medicine	2.7	4.2	6.3
Traditional practitioners	7.7	6.2	2.4
Self-treatment and self-medication (medicines bought at drugstores)	51.4	42.4	24.4
Government health centres	4.4	16.8	13.3
Government hospitals	11.1	10.0	32.8
Private clinics and hospitals	22.7	20.4	20.8

Source: Ministry of Public Health (1978: 45 and 1982: 78) United Nations (1986) Institute for Population and Social Research (1987) quoted in The Triumph of Practicality. Ed. Stella R. Quah Published by Institute of South East Asian Studies, Singapore, 1989.

Whether consumers use traditional or modern medicines to self-medicate is not known. However, herbs are available in the market in various forms of commercial products, including cosmetic lotions, creams and soaps as well as a vast pharmacopoeia of herbal preparations in modern dosage forms. Food and dietary supplements with medicinal properties are also available. About 100,000 traditional healers were involved in the preparation of herbal medicines in 1987 but few of them were practising healing full time.(74)

2.B.vi. *Republic of Korea*

The Republic of Korea is unique in that traditional medicine is favoured equally by all levels of society. Health insurance coverage is available for traditional medicine and traditional medical practitioners typically earn more than modern medical practitioners due to the popularity of the traditional approach to health care. However, only 15 to 20 per cent of the national health budget is allocated for traditional medical service.(75)

The traditional medicine market is estimated at about $2 billion a year or per capita consumption of $46 per year. Pharmacists trained in Western medicine wanted to

enter the traditional market. The Government held an examination to license these pharmacists to practice traditional medicine. The traditional healers demanded that the examination be declared null and void alleging that the examination was too easy and threatened to close all their shops if their demands were not met.(76)

It would appear that the Republic of Korea is perhaps the only country where a pharmacist has to be licensed in traditional medicine before he can stock and sell traditional medicine. The per capita consumption of modern pharmaceuticals is 33.9.(77) This is lower than that of the per capita consumption of traditional medicine.

2.B.vii. *India* (78)

Traditional medicine in India is regulated by the Drugs & Cosmetic Act 1940 (Act No. 23 of 1940). This Act regulates the import, manufacture, distribution and sale of drugs. A separate section deals with traditional drugs. There are three well known and widely used systems of medicine in India, namely Ayurvedic, Unani -Tibb & Siddha. Each system uses its own variety of herbal remedies. For the purpose of this Act, all herbal remedies belonging to these three systems are collectively known as Ayurvedic drugs.

Drugs & Cosmetics (Amendment) Act 1982 defines Ayurvedic drugs as follows:

> "Ayurvedic drugs include all medicines intended for internal or external use for or in the diagnosis, treatment, mitigation or prevention of disease or disorder in human beings or animals and manufactured exclusively in accordance with the formulae described in the authoritative texts of Ayurvedic, Unani-Tibb & Siddha systems of medicine specified in the First Schedule".

There are 54 Ayurvedic texts mentioned in the first schedule. Administratively, the traditional and modern systems are separate. There is a central or federal department for the Indian System of Medicine (ISM) at the Centre in New Delhi, and each state has a directorate for ISM.

A recent Amendment to Section J of Drugs & Cosmetics Act has triggered a debate between a section of the national Ayurvedic industry and consumers.

Under an amendment introduced in January 1996, drugs for liver disorders, memory enhancement and several other ailments for which Ayurvedic remedies exist, can no longer be advertised as cures for these disorders.

A spokesperson for a national Ayurvedic drug company described the amendment as the deathknell for the Indian herbal drug industry which may be wiped out by the year 2005. On the other hand, the Indian Council for Medical Research (ICMR) and consumer organisations have welcomed the amendment, saying that some sort of regulation is necessary to ensure the safety, efficacy, quality and manufacturing practices of medicines sold over-the-counter as Ayurvedic drugs.

However, this amendment does not prevent medical representatives from recommending their products to physicians. This, say spokepersons for the small scale industry, will be discriminatory. The larger companies will recruit an army of medical representatives to promote their products to physicians in their clinics. Small firms will not be able to do this.(79)

Research & Development

Research & Development (R & D) on indigenous medicinal plants have been going on since Col. Chopra initiated R & D in the School of Tropical Medicine, Calcutta about 50 years ago.

Several research institutes and university departments are actively engaged in R & D on the Indian systems of medicine. Many of these have been funded by the Indian Council for Medical Research. The Central Drug Research Institute (CDRI), Lucknow was established in the late fifties.

CDRI and other research institutes are focussing their R & D efforts to isolate new active ingredients from medicinal plants to develop new drugs and obtain patents on them.

Consumers are disappointed that these research institutes have not addressed consumers' concerns about the safety, efficacy, quality, costs and manufacturing standards of the tens of thousands of Ayurvedic drugs and particularly those that are skillfully and aggressively promoted. Consumers pay enormous amounts to purchase them.

A good example is the German Ayurvedic drug Essentiale. Messrs Rhone-Poulenc markets this drug as a "Membrane-therapeutic agent for liver diseases" and sold 943,140 units valued at 41.1 million rupees in 1994.

It was left to a consumer organisation, the Foundation for Health Action, Calcutta, to get the manufacturing licences for this drug, given by FDA in the States of Maharashtra and Gujerat, cancelled effective on 25-6-95 and 15-3-96 respectively on the grounds that there was no evidence of its efficacy and that it was not an Ayurvedic drug according to the Drugs & Cosmetic Act.(80, 81)

However, this drug is imported and available in the market in India and is prescribed exclusively by practitioners of modern medicine.

Multinationals and traditional medicines

The Drugs and Cosmetics Act does not recognise herbal remedies; it only recognises Ayurvedic drugs manufactured in accordance with 54 ancient texts. Notwithstanding this a few multinational companies have changed their manufacturing licences for well known allopathic OTCs to Ayurvedic drugs. For example, Smith Kline Beecham now markets Iodex as an Ayurvedic drug. Proctor & Gamble markets Vicks Herbal. It is relevant to note that traditional drugs have no excise duty. **In order to legitimise**

their clain. at these are traditional medicines the manufacturers have substituted the chemical names of the ingredients with Sanskrit or older English names. For example, the camphor in Vicks Herbal is Karpoora; citric acid in Eno's fruit salt is Nimbasaar; methyl salicylate in Iodex is Oil of Wintergreen.

In India practitioners trained in modern medicine though not trained in other systems or medicines can freely prescribe medicines belonging to other systems. Examples are the Ayurvedic drugs such as Essentiale, Ginsec (Dupher Interfran), and Liv 52 (Himalaya Drug Company).

However practitioners trained in other systems cannot prescribe modern medicines. In July 1992 a homeopathic practitioner treated a patient with paracetamol and an antibiotic. The patient later died of complications of typhoid fever. The homeopath was taken to court and the Supreme Court found him guilty of *negligence perse*, because the Indian Medical Act prohibits any person without the requisite qualification in allopathic system of medicine to practice in that system. The judges further stated:

"A person who does not have knowledge of a particular system of medicine, but practices in that system is a quack and a mere pretender to medical knowledge or skill or to put it differently a charlatan."(82)

Based on this judgement, can practitioners of modern medicine who prescribe Ayurvedic drugs be called quacks or charlatans? Consumers are concerned that there is uncontrolled cross-practice - practitioners not trained in a particular system using drugs belonging to that system indiscriminately.

3. Evaluation of traditional medicines

Clinical pharmacologists and other scientists working on medicinal plants focus all their attention on isolating and identifying biologically active ingredients in medicinal plants and herbs.

Traditional pharmacologists argue that the efficacy of herbal remedies is due to the synergistic activity among the several ingredients of herbal mixtures. Complex mixtures of plants or herbs form the basis of traditional medicines. The mixtures are usually subject to crushing, heating, boiling, etc. It is possible that this process may change the chemical structure of the active ingredient in the plants.

Traditional healers do not accept that the efficacy is necessarily due to the active ingredients in the plant. According to them, modern clinical pharmacologists by their "active ingredient" approach, take the knowledge from the plant but throw away the wisdom of centuries.

If there is acceptable historical evidence that traditional herbal remedies have been effective in the treatment of certain diseases, but neither their active ingredients nor the mechanisms are known, will it be ethical or moral not to

accept and use that treatment? Some examples of successful treatment by traditional medicines will be useful to answer these questions.

In the late 1980s children attending the Dermatology Department, Hospital for Sick Children, Great Ormond Street, London showed marked improvements in their eczema symptoms. These improvements were due to oral treatment with aqueous decoctions of a mixture of 10 Chinese medicinal herbs.(83) Clinical experimentation and pharmacological testing revealed that a mixture of the 10 herbs were necessary and that the efficacy could not be attributed to any single active ingredient from any one of the 10 Chinese herbs. A placebo controlled double-blind clinical trial using the 10 Chinese herbs was carried out on 47 selected children with non-exudative eczema.(84) The conclusions of the trial were to validate to the standard of current conventional clinical trials utilised in the UK that the traditional Chinese therapy was efficacious.

If these children had to wait till the clinical pharmacologists had screened the 10 Chinese plants for active ingredients and tested them for biological activity, they would never have been given the chance of getting effective treatment with a mixture of 10 Chinese herbs.

Potential cytotoxic drugs are tested for their activity against experimental or human cancer cells. Efficacy depends on the ability to kill specific cancer cell types without affecting normal body cells. Studies on the effects of certain Ayurvedic herbal preparations for possible cytotoxic activity revealed that these herbal preparations did not kill the cancer cells but transformed them into normal healthy cells.(85) These drugs, therefore, have a different mechanism of action. Classical testing methods would have missed this important anti-cancer activity.

I wish to conclude this section with a philosophical question. Is medical science one universal and uniquely expressed (western) paradigm - a biomedical paradigm? If it is possible to conceive of alternative methodologies, theories and practices in other domains such as music, logic, linguistics, art and politics, is it not possible to consider possibilities of alternative methodologies in medical science, knowing that doctors practice medicine within a biopsychosocial paradigm?

The guiding principles by which knowledge is built up in the biomedical paradigm are those of the scientific method where hypotheses are clearly stated, then tested and accepted or rejected as truth "until further notice" or "within the stated confidence limits" using only experimental or quasi-experimental designs - a deductive approach to problem solving.

Is it possible for research scientists to examine other methodologies, for example, using experiential methods - an inductive approach, to evaluate traditional herbal remedies?

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DRA - 10.

People Initiatives

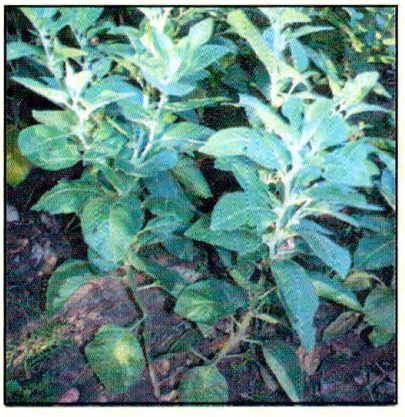
Best Practices of A Herbal Village : A Case Study in Bangladesh

July 2005

According to the World Health Organization (WHO), 4 billion people, 80% of the world population currently uses herbal medicine for some aspects of primary health care.

As major component in all indigenous peoples' traditional medicine and a common element in Ayurvedic, homeopathic, naturopathic, and traditional oriental and Native medicine, herbal medicine has a significant importance on sound health of human body. WHO states that of 119 plant-derived pharmaceutical medicines, about 74% are used in modern medicine in ways that correlated directly with their traditional uses as plant medicines by native cultures. Major pharmaceutical companies are at present, conducting extensive research on plant materials gathered from the rain forests and other places for their potential medicinal value. Very recently it is found that different cosmetic companies like Square Company, Aromatic Cosmetic Company, Keya Cosmetic Co. and Uniliver Co. of Bangladesh have started to use herbal materials for increasing the medicinal qualities of their products suitable to human body. Herbal plants are also being used as row materials of medicinal plants and are directly being used as medicine at local and national levels. Thus herbal plants are playing an important role in creating a good effect for preventing diseases.

Once upon a time people of Bangladesh were depended on quake, mysticism, hymns and herbal medicinal treatments for healing from diseases. With the advance of modern science, allopathic and homeopathic medicines are occupying those places. In spite of prevalence of these modern medical treatments, herbal medicinal treatment still is not so less. In Bangladesh, herb and herbal products of millions of money are imported from other countries like India, Pakistan, China, Nepal, Bhutan and Malaysia every year. Most of the imported herbal materials are brought from India. Markets of these imported materials are located in Chalkbazar of Dhaka and Moulivibazar. Different Ayurvedic and Unani companies purchase herb from these markets. Though some of such companies have own herb gardens. During last two decades, popularity of this area has increased in the country. Nowadays herbs are sold in the hat-bazaars at the levels of district, upazila and village. In rural areas poor peoples are also cultivating herbal plants in their own lands. Herbal villages of Natore in the country can be sited in this regard. At least 45 species of herbs are being cultivated in these villages. Cultural practices of these plants are increasing day by day.



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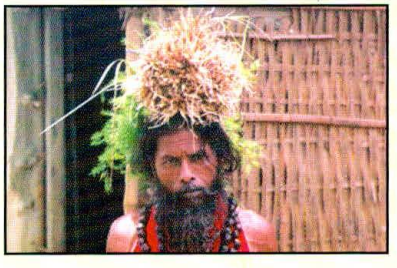
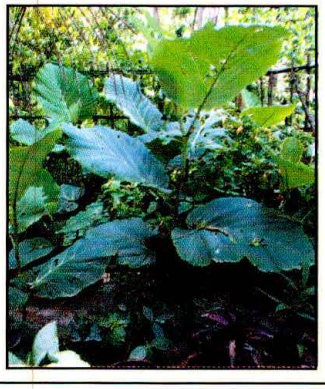


How Do Many People Involve in Herbal Plantation?

Nowadays, at least 255 farmers, 100 hawkers and 300 herbal healers are found to be very active in the 10 villages of Natore in respect to herbal cultural practices. At present, 8-9 retail shops, 01 wholesale shop and 03 groups have been established based on those herbal areas. Dry plant powder, roots, barks and seeds are sold at those shops. In the holesale shop herbal plants are collected according to the demand of the buyers and arrangement is done for selling those at reasonable price. Each bundle of Ghritakanchan weighs 55 kilograms .For each bundle 04 Taka is to be paid to the market committee as fee. In case of other herbal plants, money is taken in other rates. The group members get opportunity of selling their own herbal products through the wholesale shop. At present, number of members of Kholabarhia Adarsha Chashi Kallyan Samity is 127. Each member deposits 50 Taka as savings every month. Each alternate 05 years, that money is divided for the welfare of group and members.

Ghritakanchan (Indian Aloe)



Challenges:

- Though currently, rural poor people can easily cultivate any kind of herbal medicinal plants in their own land applying indigenous knowledge, if such cultivation is extended in larger area there will be probability of enacting patent rules resulting in creating barrier of extension of herbal medicinal crop cultivation.
- At present poor people can obtain maximum benefit from marketing their herbal product as the existing marketing system is managed by the poor producer. But in future, if the production and marketing system will become large, production and market controlling will go under rich businessmen which will deprive the poor people to get maximum benefit.
- In case of extensive and intensive culture of herbal crops, farmers may used to apply chemical fertilizer and pesticide in the expectation of more production and profit, which will create public health hazards.

History of Herbal Practices in the Villages:

The villages where herbal cultural practices are continuing are known as herbal villages. The main actor behind the history of herbal practice is a simple illiterate poor person named Afaz Pagla. Though the profession of Afaz Pagla was suddenly changed, the scenario of the villages has changed slowly for about 25 years. Once, an herbal healer named Jalil Pagla was selling herbal medicine in a Tebarhia hat of Natore. In the mean time, Afaz Pagla arrived at that place while showing monkey's play. Having been motivated by Jalil Pagla, he returned to his native village Kholabaria Khamar. Leaving showing monkey's playing he started to collect herbal medicinal seedlings and saplings and transplant those in his own land. Thus he started for herbal medicinal treatment for healing people from diseases. Once, his late elder brother Riach Uddin Maker (Bi-cycle maker) brought 3-4 seedlings of Ghritakanchan (Indian Aloe) for planting. Coming to learn high medicinal qualities and market demand of this plant, the neighbors also started to cultivate the Ghritakanchan. Thus such cultural practices have increased day by day in that area and gradually in other adjacent villages.

Location of the villages:

A total of 10 villages of Lakshmipur Kholabaria Union situated at 5 kilometers west from Hoybatpur which is also located in the east of Natore town have been covered with herbal cultural practices. The villages are: 1.Lakshmipur, 2.Hajigange, 3. Amirgange, 4.Ibrahimpur, 5. Taltalia, 6. Kalitala, 7. Kholabaria Khamar, 8. Nutan Bazar, 9. Kathalbari, and 10. Barhabarhia.

Why Do People Call Herbal Village?

People of the said villages are mostly depended on herbal cultivation, processing and marketing. Most of the fallow lands of the villages have gone under herbal crop production. Even, many field croplands have also being utilized for herbal cultural practices.

Livelihoods of major portion of the farm families in these villages are deeply correlated with the cultivation of herbal medicinal crops. So, people started to call those villages as herbal villages. Even, Government has also recognized those as herbal villages. In 5-6 January 2005 the issue was discussed in the National Parliament of Bangladesh where proposal on recognizing the said villages as herbal villages was passed.

Story of Afaz Pagla

Every invention has as an inventor, there is so a pioneer in every adventure. Similarly, in this herbal village there is also an initiator whose life leading is of different polarity. He is no other than Afaz Pagla who lives at Kholabarhia Khamar of Natore and used to show monkey's play. Being a philosopher's stone of change, a person named Jalil Pagla who lives in another village showed Afaz Pagla the way of different life. Afaz Pagla left showing monkey's play when he was around 35 years of age. It was started to make collection in his nomadic life. This is not collection of money or luxurious resources. He collects plants moving across deep forest and transplants those plants in his homestead area. Collecting plants from different places he hears the medicinal values and informs these values to other people. Thus the villagers started to love herbal medicinal plants gradually. Afaz Pagla told all people to plant Ghritakanchan (Indian Aloe) as it is easy to cultivate and very profitable. In influence of him, currently, Ghritakanchan is being cultivated in 30 acre land in the herbal village. There is no as light under lamp, there happens not so exceptional in the life of Afaz Pagla too. Though his vision is that there will be developed herbal villages in whole over the country and these herbal plants will also spread over whole world. But, being concrete houses belonging to those who have been involved in this cultivation, Afaz Pagla he lives in tin shed house. Though he is now about 65 years old, still he is very enthusiastic for doing his restless job with the hope of realizing his vision.

Livelihood of Villagers on Herbal & Case Study:

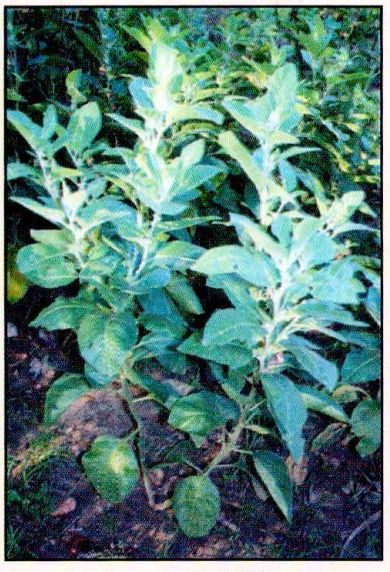
There will be found only herbal crops whole over some villages. In fallow land of homesteads of these villages, one or more species of herbal crops are found to cultivate. Many of the farmers have started to cultivate herbal crops in their cultivated lands. The main reason is, according to their opinions, that profit obtained from cultivation of herbal crops is more than that from rice and jute cultivation as a result of low production cost. Husband lost Helena Begum together with her daughter has cultivated herbal crops in her own land of 50 decimal. She leads her life through cultivating different species of herbal crops in her land. Once, she could earn at best TK. 2,200.00 during five months cultivating crops on 10 decimal lands. One herbal businessman named Salam cultivated cotton crop (Shimul) in her one acre of land. After six months of seed sowing, Shimul roots were harvested for sale. During one year, total cost of production for one-acre land is TK 15,000.000 whereas income from same land and for same duration is TK. 100,000.00.But before that, it could be obtained TK 18,000.00 profit from the same land and period. Many people are involved in this work in different ways. In those villages, different works have been developed based on herbal plantation. Some cultivate, some take care of crops, some cut twig of Indian Aloe, some make packets for marketing the herbal products, some sell at hat-bazaars moving from one place to other places and some bring these to the market of Dhaka.

There lives Abdur Rahim in Kholabaria Khamar. His right foot had to be cut for gangrene. To meet treatment cost he had to sell two bighas (66 decimals) of land.Now, 10 decimal land is his only the resource where he is cultivating herbal crops. Simultaneously, he supplies herbal materials to Dhaka Wednesday to Friday every week. Thus, he has made his one daughter got married and is continuing education of his one son. At present, his family is doing well.

Through different ways, it has been known that number of farmers and businessmen is continuously increasing. Similarly, number of healers like Kabiraj and Hakim who know medicinal values of herbal plants and can prescribe medicine is also increasing. But whatever they know about the application of medicinal values of herbal plants, people are being benefited. So, people go to them for their needs. These healers easily tell people about the name of herbal medicine in case of ordinary diseases. Thus people also become self- confidant. It has been learnt through traveling across the villages that women of these areas are now capable of resisting general diseases using the herbal plants planted surrounding their houses. They often use the solution of Indian Aloe for hospitability of their guests.

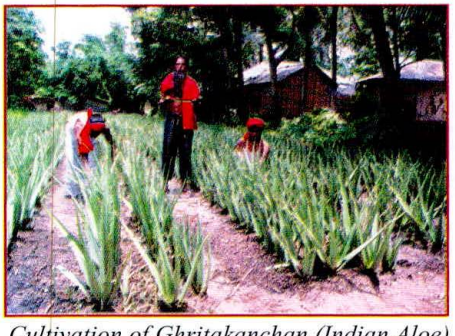
Name of Herbal Plant of Herbal Villages:

In most of the homesteads of the villages the main cultivated plant is Indian Aloe. Though there is exceptional of it. Some are making garden on asparagus; some are doing it on cotton root (Shimul) in large scale. Generally there are found 45 species to be cultivated in these areas such as: 1.Ghritakanchan (Indian Aloe) 2. Shatamul (Asparagus) 3. Ashwagangha (Withania) 4.Tal Mul (Curculigo orchicides) 5. Bhui Kumra (Impoema peniculata) 6. Shimul (Cotton root) 7. Shwet Lazzabati (Sensitive Plant- white) 8. Lal Lazzabati (Sensitive Plant -Red) 9. Nerha Lazzabati (Sensitive Plant) 10. Raj Kantha 11. Rani Kantha 12. Neel Kantha 13. Hasti Karnpalash (Downp Branch Butea)14. Rahu Chandal 15. Rakta Chandal 16. Guru Chandal 17. Turup Chandal 18.Brahma Chandal 19. Bhui Chandal 20. Bone Chandal 21. Pathar Kuchi (Irisspa) 22. Masinda 23. Lal Tulsee (Holy Basil -Red) 24.Krishna Tulsee (Holy Basil- Black) 25. Shwet Tulsee (Holy Basil -White) 26. Ram Tulsee (Holy Basil -Ram) 27. Durga Tulsee (Holy Basil- Goddess) 28. Gandaraj Tulsee (Holy Basil -Essence) 29. Kalo Dutura (Datura metal) 30. Sada Dutara (Dutura metel) 31. Tajbal (Velvet leaf) 32. Olat kambal (Devil's Cotton) 33. White Kuch (Bear Tree - white) 34.Lal Kuch (Bear Tree - Red) 35. Bhui Alma (Phylanthus) 36. Ishwar Mul (Indian Birthwort) 37. Ananta Mul (Indian Sarsaparilla) 38.Shankha Mul 39. Sarpagandha (Snake Root) 40. Akangee (Zedoary) 41. Basak (Vasaka) 42. Thankuni (Asiatic Penny Wort) 43. Akanda (Gigantic Swallon) 44.Kalo Megh (Creat) 45.Michhri Dana (Gold Thread).



Ashwagangha (Withania)

How to Cultivate the Harbal Plant



Cultivation of Ghritakanchan (Indian Aloe)

Though there are different production technologies for different plants. But in consideration of soil and climatic conditions of Bangladesh, cultivation technology of herbal plant is very easy. For example- Ghritakanchan is to be cultivated in line planting where line spacing is 1.5 feet and seedling-to-seedling spacing is 6-8 inches. For Shimul cultivation, land is needed to plough two times and weeding out is done three times a year. Roots of Shimul are become suitable for harvest and sale after six months of sowing. Shatamul grows well in loam soil. Shatamul takes 2-3 years to be matured well for sale. Market price of Shatamul is Taka 25-30 per kilogram. But price of dry powder of Shatamul is Taka 300.00-400.00 per kilogram. Seeds of Gold Thread are also sown almost like turmeric and cultural practice of this herbal crop is same as turmeric. It is sold in the market at Taka 40.00-50.00 per kilogram in raw form whereas its market price in dry condition is Taka100.00-1200.00 per kg. Besides, in these villages Anantamul and Hasti Karna Palash are cultivated as perennial crops that take 4-5 years to be matured. Alongside, as short period crops Ashwagandha and Shimul are cultivated. Seed of Ashwagandha is broadcasted like amaranth. Its market price is Taka 120.00 per kilogram. Alongside of this selling, all types of herbal seedlings are sold in different places in the country through the local brokers. Amount of these seedlings selling is not considerably less. In case of only Ghritakanchan cultivation, artificial fertilizers and pesticides are used. In case of other herbal crops, it does well to apply ordinary cultural practices.

Recommendations:

- *Making people aware of beneficial qualities of herbal medicinal plants through media advocacy, drama and documentation film show etc, people's interest can be grown for more production and utilization of herbal crops.*
- *Through establishing demonstrative organic herbal garden at different places, herbal cultural practices can be widely extended.*
- *To protect unexpected patent rules people's voice needs to be raised for influencing policy makers.*

Conclusion:

Herbal medicinal plants available in our country are well adapted with our climatic and soil conditions. People of rural areas are more or less faithful with the medicinal values of herbs. People's interest in herbs has been proved at the herbal villages in Natore. Initiative of Afaz Pagla has got popularity in his village as a result of which, farmers of own village have gradually adopted his herbal cultural practice and this herbal cultural practice has also disseminated into adjacent villages. In the aggression era of modern allopathic treatment it is really a good notion. With spreading this model, herbs could be possible to be exported in other countries meeting the domestic demands. Rural poor farmers will also get opportunity to improve their family economic condition through proper utilizing their land. People will increasingly use herbal plants for their primary health care, which will ensure people to keep themselves safe from chemical residual effects of medicine of modern allopathic treatments. So, if it is upheld properly, the model of herbal villages initiated by Afaz Pagla will spread over the whole country quickly.

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THE HEALTH SERVICE SOCIETY

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DR. BACH FLOWER REMEDIES OF ENGLAND

The medicinal effects of 38 wild flowers were discovered and introduced by the late Dr. Edward Bach, M.B.B.S., M.R.C.S. of London way back in the year 1936. Thus, this system was introduced not by a stranger to medicine, but by one of the leading allopathic medical practitioners of Harley Street in London, which is the Hollywood of doctors.

Before learning any subject you would do well to know the scope and limitations of the subject as well as the scope and limitations of the teacher from whom you are learning it. The one single word to describe both is 'grace'. *Grace* means much more than what you deserve or what you would have expected or even imagined. Yes, in the system of Bach Flower Remedies we find a world where everything concerning our life on earth is answered completely, exactly and accurately. 'Precision' is the action of these remedies.

A new-comer to the subject may think that these remedies are for 'pains' and 'aches.' But it is much more than that. To enable you to understand the scope of the subject I would first of all put a question before you: "What is the use of encyclopaedias?" You may reply that it is for 'reference' etc. But it is not so. You need text-books for study to get a degree in your hands. After this when you enter your profession, be it psychology, medical practice or any other field, to go up the ladder, you work in various organizations, gain experience, than work under so-called

559
14/9/05

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seniors and experts, attend seminars and workshops etc. May be, after 15-30 years, you too may or may not go to the top:

But there is a sure short-cut to go up the ladder in just 1-2 years time. It is the study of encyclopaedia. If any one has written an encyclopaedia in your subject and if you study it as a text-book, you too can go to the top and no one can excel you in your line.

Text-book is for passing Examination to get a degree or diploma.	Encyclopaedia is the text-book for professionals to become No. 1 in their field.

You may ask me as to how I came to know about the correct use of encyclopaedias? Here comes in BACH FLOWER REMEDIES. Your knowledge becomes complete, exact and accurate with the aid of Bach Remedies study. Call it addiction, unemployment problem, hijacking, naxalites, extremists—Bach Remedies give the right solution and nowhere else, we get the right answers as to why men suffer, be it disease or problem in life like poverty etc.

Let us examine one of the social evils *viz.*, 'addiction' as to how Bach Remedies approach it:

1. *Walnut* is the name of one of the thirty-eight Bach Remedies discovered & introduced by Dr. Edward Bach. (Each one is prepared from the trace quantity of a particular non-toxic wild flower and all these thirty-eight remedies are found in one place in a thick forest in England. The place is called Mount Vernon, a small village. A few of these flowers are found here and there in some parts of the World but not all are found that too in one place!) *Walnut* is given to cure all types of addictions and also all bad habits etc. i.e., where the patient is doing one and the same thing repeatedly over and over again with his fingers/ hands-be it chain smoking, drinking alcohol in excess daily, tobacco-chewing, taking several cups of coffee/tea, thumb-chewing in children or nail-biting in elders.

   After taking Walnut for a certain period of time, though they got cured we continued to give the remedy Walnut to them, because we have to find out as to why he became addicts. In due course, these persons started learning instrumental music or painting and soon started performing in stages earning Rs. 500 to 1000 for each two-hour performance as compared to his earlier income of mere 5-7 thousand rupees working as an office clerk for 8 hours x 30 days.

   The question now before us is, "What has 'playing instrumental music/painting' to do with addiction?"

   In both cases the person does one and the same thing with slow and repeated movement his fingers/hands

   We call

Smoking cigarettes or nail-biting or taking ganja as NEGATIVE aspect of the remedy *Walnut*	Playing instrumental music or painting as POSITIVE aspect of *Walnut*

From the above we infer that mighty Nature (or God) tells all addicts: "I sent you on earth to learn and play instrumental music (or painting) and earn 1-2 thousands daily. But you did the mistake of studying science or accountancy to earn a mere few thousand rupees once a month only. TO REMIND YOUR JOB ON EARTH I made you an addict. At least now, realise your mistake, start learning instrumental music and earn a few thousand rupees every 2-3 days." Addiction is not a punishment given by Nature but a chiding only.

Thus, Bach Remedies DO NOT 'TREAT' OR 'CURE' human beings but change us from 'negative' to 'positive' types. On the one hand Walnut enables addicts to completely give up the bad habit; on the other, it enables them to automatically learn and master instrumental music/painting, irrespective of their age.

We, therefore, call Sitar Ravishanker of North India and Veena Gayathri of Tamil Nadu as "POSITIVE Walnut-type persons." Had the parents of these instrumentalists done the mistake of discouraging them to learn instrumental music and insisted on their first becoming at least a graduate, they would have ended up as a diploma/degree holder and working in an office for a mere 5-10 thousand rupees per month but soon becoming addicts to alcohol, drugs etc.

From the above, we get the lesson (by the study of Bach Remedies) that in de-addiction centers we must employ teachers of instrumental music/painting and this alone is the only and correct solution to cure addictions.

2. Let us now go to another Bach remedy *Cherry Plum*. This is prescribed for the following symptoms:

   (a) where the affected person weeps/cries with 'unbearable' pain in body (whatever may be the name of his disease)

   and/or

   (b) wherever a patient prefers death to put an end to his sufferings. ('Man commits suicide by swallowing poison after trying the best doctors in vain for his chronic abdominal pain.' We occasionally read these in the local dailies. Or 'entire family commits suicide due to poverty.')

Cherry Plum not merely reduces pain but cures the underlying pathology and so the pain stops. Again in the case of suicidal disposition due to poverty, when Cherry Plum is prescribed it enables the victim to automatically find ways and means of earnings money and so the suicidal disposition disappears.

The best place to illustrate the use of *Cherry Plum* is the labor ward in any maternity hospital.

Bach Remedies are 38 in all. Every person would be of one remedy-type only at any given time. Thus, roughly three out of every hundred persons would be Cherry Plum type. Go and stand in the verandah of any labor ward at midnight and you would be hearing the shouting, crying or weeping of three out of every one hundred expectant mothers. The child wants to come out of the uterus but the mouth of the uterus *(os uteri)* does not dilate (expand.) Thus, it causes "unbearable" pain making the mother cry. This happens in the case of three per cent of expectant mothers at delivery time. We gave *Cherry Plum* at this time

to these ladies (say, 1-3 doses every 5-15 minutes.) Soon they were safe and normal delivery. At this point please do not take down notes that the Bach Remedy *Cherry Plum* is for "easy delivery." Not only painful delivery but in all diseases or problems in life where the concerned person cries/weeps with 'unbearable' pain (or resort to suicide) *Cherry Plum* is to be prescribed and it cures them. In the case of life problems making them to commit to suicide, the remedy enables them to find ways and means to solve their problems automatically.

I call aside all the above ladies to whom *Cherry Plum* was prescribed for 'unbearable pain' and advise them to take daily one dose of the same remedy. They say, "Sir, we have delivered the baby. Why more medicine?" I advise them that this remedy would enable them to know as to why they got such 'unbearable' labor pain for hours together and also prevent all sufferings (be it bodily diseases or problems in life) making them weep or cry. All of them started taking the remedy. After a few weeks it was noticed that all of them started learning vocal music (irrespective of their age) and after a year were performing in music clubs and stages and their income multiplied several-fold.

Mighty Nature indirectly tells the above ladies: "I sent you on earth to learn vocal music and earn several thousand rupees. But you did the mistake of choosing an unsuitable profession to earn a few thousand rupees once a month. To remid your work on earth, I gave you that unbearable labor pain. At least now realise your mistake, start taking the Bach remedy *Cherry Plum* which not only cures your prolonged labor pain, but also, simultaneously enables you learn vocal music and earn several-fold of your previous monthly income.

The question now before us is, 'What is the connection between 'vocal' music and 'crying with pain or problem in life?' In both instance 'voice' is used continuously in high pitch.

We call

'Weeping with pain or problem in life,' as 'NEGATIVE ASPECT' of *Cherry Plum*	*'Singing'* as 'POSITIVE ASPECT' of the remedy

M. S. Subbulakshmi of Tamil Nadu and Latha Mangeshkar of North India are called by (Bach Remedies Practitioners) as 'Positive' Cherry Plum-type personalities. Suppose they had chosen a routine monthly income job, they would have ended up with disease or problems in life making them weep.

14-year old girl studying in 9th Std. would weep/shed tears for every minor setbacks/disappointments. I gave her Cherry Plum. After a few weeks of taking it, the girl asked her mother to allow her to join evening classes for learning music. The lady came to me asking whether she can permit her, because this would affect her studies as she was getting low marks in most of the subjects. I told here that if and when correctly prescribed Bach Remedies, would enable everyone to earn several-fold of their counterparts.

After learning vocal music for five months the girl started performing in local music troupes and next year she got a job as musician in a five star hotel in

Dubai on a salary of one *lakh rupees*.

Let us now turn our attention to the learning of Bach Remedies.

This system of medical treatment has no 'theory' or 'concept' introduced by human beings like Kant, Sigmund Freud etc. Here, everything is practical and practical only. Again, in this system no one has 'classified' so-called psychological patients as 'schizophrenic' or 'deviant behaviour' 'juvenile delinquency' etc. etc. To learn this subject you do not do any 'systemic' study of the subject for months and years in any institution doing a course of study.

On the other hand, a classification of human suffering do exist and all of you know of it, but all these years you have been ignoring them. Let me explain this:

1. After coming back from radium treatment my neighbour was explaining what all happened in the hospital and ended up saying (in reference to his sufferings with cancer pain and horrors of side-effects of radiation treatment): "No one should get this type of suffering." Please make a note of his words "No one should get this type of suffering."
2. A patient with chronic abdominal pain that resisted treatment by specialists, used to say quite often that he was paying for his past sins and that is why doctors are not able to diagnose his case.
3. In another case of chronic headache, since no treatment was of any help, he would say, "All doctors are useless. They only know how to extract money from patients."

First person, "No one should get this type of suffering."

Second says that he is paying for his sins. (Blames himself and not doctors)

On the other hand, the headache patient "blames" doctors for grabbing money from patients without giving any relief.

From time immemorial, all of us have been listening to the above words.

a. Whatever may be the name of disease or problem in life, if a person says that no one should get the type of suffering which he has, the Bach remedy to be prescribed for his is ROCK ROSE.

b. For self-contempt or sinful feeling, the Bach Remedy is PINE.

c. If a person is blaming others or God for his sufferings he indirectly says that he is to be prescribed the Bach Remedy WILLOW.

Thus, we say that in Bach Remedies system the PATIENT IS (indirectly) TELLING OR INDICATING THE REMEDY THAT WE HAVE TO PRESCRIBE FOR HIM.

For all of you, as well as for doctors of all systems of medicines, the above words or statements has no significance. But all of us since our childhood are listening to the above statements. Thus, there does already exist a classification of patients by the words used by them in reference to their diseases or life problems.

Now, in BACH REMEDIES SYSTEM we make use of these statements only, for selecting the remedy.

Dr. Edward Bach discovered 38 wild flowers. When we examine the method of using these remedies (be it bodily diseases or psychological complaints or problems in life) we are surprised to find that every one of us would fall within the description of one remedy only.

Thus, on the one hand we find 38 different types of personality or individuals

On the other hand, mighty Nature has provided 38 corresponding flowers in Nature.

What you have to learn in this system is just and only the names of 38 different remedies along with their corresponding mental states or behaviour or attitude or words used by them. You are not required to do psycho-analysis etc.

No sooner you complete our 4-day personal course, you are able to identify patients with their remedies (may be your neighbor/relative or friends.)

We are yet to come across any type-person who does not fall under the classification of one of the 38 Bach Remedies.

Let me now describe, by way of example, what we mean by remedy-type or personality, as it already exists in humanity.

Name of Bach Remedy	**Remedy description. (Picture of persons for whom the remedy is prescribed and with type you would have met quite often)**
CRAB APPLE	Sensitive to dirt, filth, contamination, contagion, infection, sepsis, ugliness etc. They avoid using toilet in school/cinema theatre and in their friends' houses. There are extreme types of CRAB APPLE-type persons who would wash their hands after shaking hands with others. These are called Crab Apple-type persons. These persons also do not use others' soaps, towels, kerchiefs etc. Another classification of this remedy is "Sensitive to his appearance." Pimples in the face of teenage college girls, grey hair, baldness etc. etc. Those who use wig or use hair-dye we call them Crab Apple type persons. When this remedy is prescribed most of their diseases are cured and problems in life get automatically solved. Also either their baldness is cured or the remedy enables them to accept it.
CHERRY PLUM	*'Mind giving way' 'fear of loss of reason'* 'Uncontrollable' anger, unbearable thirst, insatiable appetite, cannot wait for food when hungry. Irresistible temptation. (A diabetic patient of Cherry Plum-type cannot avoid sweets on seeing it when served in dinner parties.) ***Suicidal disposition:*** Wherever a person prefers death to put an end to his sufferings (be it bodily pain or harassment from debtors) this remedy comes in. Occasionally we read in local dailies that a person commits suicide because of unbearable chronic abdominal pain that resists the treatment by best doctors in the city. Cherry Plum, when

prescribed, not merely stops the pain. It cures the underlying pathology and so the pain is cured completely & permanently.

"Man commits suicide due to extreme poverty." This also we read occasionally in the dailies. Cherry Plum does not merely remove suicidal disposition but the remedy enables him to find ways and means to earn sufficient money and thus suicidal mentality is cured.

I repeat, that I am not introducing any new classification of 'concepts' about human sufferings but a type of classifications as mentioned above do exist which all of you know.

In other words, we say that in BACH REMEDIES SYSTEM the patient himself indicates the remedy to be prescribed for him. This is either

(i) by way of words/phrases told him; and/or

(ii) his attitude towards his disease/problem or his attitude towards the doctor

and/or

(iii) the words used by those around the patient

and/or

(iv) in the case of kids which have not learnt to speak, report of the mother/ nurse (such as ''desire to be carried always' 'fear of strangers' 'timidity' etc. etc.)

———

Let me finish with an in-depth study of one more Bach Remedy called ROCK WATER

Dr. Edward Bach abandoned his lucrative medical practice in Harley Street and wandered in forests in search of a better method of treatment. Fortunately, he came across 37 wild flowers, all found only in one area in a thick forest in England, the place called Mount Vernon, a small village.

He found that the water of natural springs found among rocks also had medicinal properties. This he called ROCK WATER.

37 flowers + 1 spring water (called ROCK WATER) = 38 remedies

He took five out of the 37 flower remedies, mixed them and called the mixture of RESCUE REMEDY. Thus the total comes to 39 in all (to 37 + Rock Water + RESCUE REMEDY)

Just because these are imported into India from England you need not think that these must be costly. These are the cheapest of all medical systems. These are available in all homoeopathic drug stores. These have no toxic effects whatsoever and there are no diet restrictions.

Let us now learn the use of Rock Water.

Those extremists and Naxalites who take law into their hands are called negative Rock Water-type persons. In other words, those who follow a 'cult' are Rock Water negative types.

Hijackers too are negative Rock Water-type persons. You are travelling in an aircraft and in the mid-air it is being hijacked. If you have the remedy Rock Water in your packet, take two pills and chew them. The hijacker would release you alone. Of course, all those who take Rock Water would be released by the hijacker.

What does happen if you take Rock Water? The remedy makes us so humane that the inhumane nature of the hijacker dilutes away. Rock Water is recommended for SPECIAL TASK FORCE police personnel dealing with extremists, naxalites and commandos surrounding a hijacked plane on the ground. If they take Rock Water, these extremists who take law in their hands would automatically surrender to them.

USES OF ROCK WATER IN OUR DAY-TO-DAY LIFE. A child is kidnapped and the kidnapper demands a ransom of a few lakh rupees. At this moment all members in the family of the kidnapped kid may start taking (say every 2-3 hours) all the following Bach remedies:

ROCK WATER to remove the inhuman attitude of the kidnapper;

RED CHESTNUT (Because the relatives become anxious for the welfare of the kidnapped child)

ROCK ROSE (Terror/Panic situation. The kidnapper may kill the child)

GORSE (Hopeless situation). Without paying ransom amount, which you don't have, you cannot get back the child alive.

SWEET CHESTNUT (During the scene of kidnapping every member of the family starts praying to God. (A dose of Sweet Chestnut if taken before prayer, enables you to automatically pray correctly and thus your prayer is answered)

Within 24-48 hours of taking the above remedies by the family, the child comes back safely without being hurt and without your need to pay any ransom.

By taking Rock Water you cannot make every one bow their head before you. But if any one misbehaves with you or threatens, Rock Water protects from unruly and anti-social elements, rowdies etc.

In Police stations and R.T.O. offices as well as in Registrar's office you cannot get things done without paying bribe. Before going to these places take a dose of Rock Water and another Bach Remedy called Gorse and you get things done without paying bribe. By your taking Rock Water inhumane mentality disappears in the atmosphere.

If an M.L.A. or local rowdy is harassing you take Rock Water and he stops his nuisance.

Goondahs, dadhas, hard core criminals etc. would automatically surrender if the concerned Police personnel take the Bach remedy *Rock Water.*

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For postal course in Dr. Bach Flower Remedies of England, write to Dr. Krishnamurthy, Raman House, 21, Kuppaiah Street, Chennai-33.

SEMINAR
ON
HERBS IN HEALTH

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INTRODUCTION

The success of the Seminar on **"HERBS IN HEALTH"** held on December 11, 1993 was manifested in abundance when almost every participant at the Seminar made a spontaneous demand for print-outs of the subjects covered in the Scientific Sessions. While the N.S.I.(Bangalore Chapter) and H.Sc.A.I. (Karnataka Branch) are grateful to the participants for their stout support and encouragement, we have the pleasure of presenting in the following pages a collection of Lectures delivered by eminent speakers. We are sure, this will be of immense practical use to the readers.

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Keynote Address

HERBS IN HEALTH

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To be frank with you, I was a bit nervous when I got the invitation to deliver the key-note address at this seminar on the role of herbs in health because, to borrow a term from banking parlance, I know my 'credit worthiness' to this honour is not at all that good. But at the same time, I was thrilled at this rare chance to address a galaxy of enlightened people. Though I come from a family of great repute in Ayurveda, I myself am a botanist and I have been working on the Botany of Ayurvedic medicinal plants. But I did not have much time to understand the system of Ayurveda deeply. So, I have come here with the selfish motive of enriching myself on various aspects of herbs and health rather than enlightening you on them. I thank the organisers for this great honour and pass on to the text of my lecture entitled "Herbs in Health".

In fact, the subject dealt with is so vast and the applications of herbs as food, medicine and cosmetics are so wide that these points cannot be detailed in a brief talk and hence only some stray thoughts on plants and their importance in human health are presented here.

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By far, health is the most important attribute that any human being would desire and pray for. Healthy individuals are essential components of a healthy society. This explains, why medicine and health care, have acquired so great an importance in the agenda of human culture, civilization and polity.

But, what is health ? No doubt, it is all pervasive and affects all human endeavors and behaviour. But, yet, I doubt whether we have definition for health, covering all aspects of it. sually, it is defined as the general condition of body and mind as to their vigour and soundness. Our ancient system of Ayurveda, puts it more succinctly. Based on the philosophy of 'pancabhutas' and 'tridosas'; it defines health as :

Samadosah samagnisa samadhatu malakriyah
Prasannatmedriyamanah svastha ityabhidhiyate

i.e. ,Health is a state where individuals have a balance of body elements, their hormonious functioning, an enlightened state of consciousness, sense organs and mind.

Learning these philosophical disquisitions aside, we will discuss here some of the pragmatic aspects of human health, Health-care has two distinct aspects. One is the adequate nourishment required for the growth and development of human body, and the other is to keep on fighting the causative factors, both inherent and external, which would derail normal state of health, causing diseases and debilities. This is where medicine, both

the memory power. Acrid cures diseases affecting the throat, indigestion, oedema etc., Pepper, long pepper, red chillies, asafoetida etc., are acrid in taste. Astringent purifies the blood, heals ulcers and reduces excess fat. The excessive use of any of these tastes will affect the health adversely. It is interesting to note that our traditional food has some way or other included all these tastes in a balanced way.

Many of the items we use in our kitchen for preparing our daily food such as cumin, mustard seeds, fengreek, asafoetida, black gram, pepper, turmeric etc., are not only nutritious but also having high medicinal values.

Plants have provided cure for ailments since ancient times. Yet, we do not know, when and how man first discovered the healing properties of herbs. Probably, man learnt his early lessons using herbs, from the animals. Gradually, he learnt to identify the different plant species to be used in various conditions of ill health. Another probability is that plant medicine had its beginnings in ancient faiths and beliefs, got involved with occult practices and developed into herbalism. Later, it gave rise to traditional systems of treatments such as Ayurveda. It is interesting to note that the Ayurvedic classics insist on recognising medicinal plants with the help of hermits, sheperds and the tribal men. While examining the Indian scenario, we will find that herbs have been a source of solace for human ailments, from time immemorial. In Rigveda and Atharva Veda, there is

mention about the miracles of herbs. Persons brought up in the natural environment, who carried physical, mental and spiritual development to its climax, used to depend on natural vegetation. Even when the scripts or means of publication were not existing, fundamentals of the science of herbs existed among the human beings, who got benefits from it.

Mythologies give great importance to medicinal herbs.In Ramayana, Hanuman brings the Gandhamadana mountain with the 'Mritasanjivini' plant to give life to Lakshmana, who falls dead in the battlefield. 'Soma' is considered to be the divine plant created by Brahma for the longevity of gods. There are many such stories about medicinal plants which indeed establish the influence, the herbs had on human civilization, from time immemorial. Apart from these myths, in Hindu culture, we find many herbs being used in rituals like Tulasi (the sacred basil), Darbha (the sacrificial grass)and Durva.

Besides the institutional system of treatments such as Ayurveda, other local systems of medicine were in vogue in almost all traditional societies, which were called 'home remedies' and most of them are plant based. Our grandmothers used to cure many diseases of the family members, by giving juices or decoctions or pastes made out of herbs, that grew at the premises of their houses. A few examples which were in very common practice are quoted to show, how plants were involved in the routine health care.

While speaking about the medicinal herbs, **Tulasi**, the holy plant of Hindus, deserves to be mentioned first. Apart from its spiritual importance, it is famous as an effective medicine in many kinds of illness. For diseases like cold, cough, chest congestion, fever, digestive problems etc., commonly seen among children, Tulasi is used as an antidote. Decoction made of Tulasi leaves and pepper, is an effective remedy for cold, cough and fever for persons of all ages. It is also useful in various skin ailments and insect bites.

The traditional use of **Turmeric**, not only as a symbol of prosperity and fortune, but as an inevitable ingredient in several food preparations, establishes its importance in our day-to-day life. Turmeric is a well known antiseptic and it helps to destroy the poisonous substances which might include in the food. It also helps to purify blood and is widely used in the treatment of several skin ailments. Curcumin, a substance found in turmeric, is found to be effective and cream of milk, is used to improve the complexion of the skin.

Ginger, a common article, is being used as medicine in India from Vedic period. The ancient Indian and Greek physicians used Ginger as an antiflatulent and rectifier of the defective humours of the body. Ginger is a valuable drug for digestive disorders. Dried ginger boiled in water with jaggery, is a very old treatment for cough, cold and fevers resulting from cold.

Several medicinal properties have been attributed to **Garlic** a wonder drug used in many diseases. It is good for the heart, a feed for the hair, a stimulant to appetite, a strengthening food, useful in catarrhal disorders, piles, worms, asthma and cough. Garlic is regarded as an effective remedy to lower blood pressure and the cholesterol level in blood. It helps to avoid formation of gas in the digestive tract. **Coriander**, a very popular name in the kitchen, acts as a wonderful drug in various ailments. According to Ayurveda, it subsides pitta in body and is good for the burning sensation in the palms and feet. Dried coriander boiled with water is given to children to improve digestive power. It is also used an eyewash in conjunctivitis.

Neem is a tree which has been popular in the past and the present as well, and it belongs to every facet of Indian life -- house keeping, religion and ceremony, agriculture and medicine. There is mention about this tree in Atharva Veda. The ancient physicians used neem to treat leprosy, diabetes, eczema and jaundice, among other diseases. Ayurvedic Samhitas refer to neem as an effective remedy against dental diseases. The modern scientific research establish the findings of the ancient Indian scholars. Everything about this tree is under scrutiny today in the Western laboratories especially in Germany and U.S.A. Neem, with its myriad bitter principles, is making news as the source of a possible cure for AIDs. It is also found to be an excellent biopesticide, herbal contraceptive, an efficient nitrogen regulator in the soil and an effective remedy for tooth decay and

gum inflammations. The American scientists call it a 'miracle tree' growing in the backyards of developing countries for solving global problems.

The **drum stick tree (Moringa olefera)** is very common in most parts of India, but seldom do we know that this tree is a store house of nutrition and medicine. The leaves of Moringa have abundant stock of vitamin A & C. Moreover, it is rich with iron and calcium. The soup made of Moringa leaves is an excellent remedy for anaemia, malnutrition, cold asthma and general debility, besides being a well known galactagogue and aphrodisiac. The drumstick fruits and flowers also are highly nutritive. Moringa is widely used in the treatment of night blindness, hypertension, urinary problems and some kinds of rheumatism.

Herbs play a vital role in the health care systems of the different tribes of India, though sometimes it is associated with occult practices. But many of the practices are worth subjecting to scientific analysis. Normally, the tribals are reluctant to reveal the identity of medicinal plants used by them. But the recent study made by the scientists of Botanical garden of Palode, Kerala, at Agasthyar hills in the Western ghats, established the necessity of such studies. They have found out a plant called 'Arogyappacha' **(Trichopus Zeylancius)** used by the Kani tribals which revealed the secret of their 'evergreen' health. This plant has today entered the modern pharmacopoea as a safe antistress, antifatigue, appetite promoting and restorative herbal tonic for people in all age groups.

But, quite unfortunately, our knowledge of plants in our immediate surroundings has suffered badly, consequent to change in social life. With the present mode of imparting instructions in traditional systems, men of medicine also have distanced themselves from plants -- the resource base. As a consequence, there is widespread adulteration in plant medicine, which in turn erodes the efficacy of the system itself. Probably, this can be alleviated a little, if men of traditional medicine could actively collaborate with Botanists.

The discovery of many of the so-called modern drugs, -- some of them life-saving, can be traced back to ancient tribal practices and traditional systems. Thus we have got aspirin (from a European plant commonly called 'meadow sweet') which is widely used as an analgesic and antipyretic, reserpin (from **Rauvolfia serpentina**) used in treating hypertension and psychotherapy; quinine (from **Cinchona** sp.) used against the dreaded malaria; vincristin and vinblastin (from **Catharanthus roseus**) used in cancer treatment; digitalin and digitoxin (from **Digitalis purpurea**) used against cardiac problems -- all from the treasure house of traditional knowledge of the various ancient societies.

In fact, plants help us in two different ways in drug development. Firstly, plants and plant parts themselves serve as medicines directly, as in most cases of traditional systems. Secondly, the 'active principle' out of several hundreds of plant compounds, is isolated and administered in concentrated form,

which yields the desired results much faster, as followed in modern medicine. With the advances in science and technology, we know that, at present, we are relying mostly on synthetic drugs manufactured in our factories. But these drugs are invariably synthesised on the basis of the models that we obtain from plant compounds. At the most, what we can do is to improve upon them for better, surer results. Thus, the innumerable kinds of penicillin that we have in the market now, are the improved versions of the original penicillin, isolated from the fungal plant **Pencillium.**

Even now, a good majority of the prescription drugs are either direct plant products or their synthetic counterparts. Yet, we have not been able to exploit the full potential of plants in this sphere. Only 5-10% of the plant species have so far been studied for their medicinal prowess, which means that majority of them are yet to be analysed and understood. In India, where we have around 15,000 species of flowering plants, not more than 4,000 species are now used in medicine. Considering the Ayurvedic maxim : "Jagathaivamanoushadham" (i.e. there is nothing which is not medicinal in this world), we have miles to go, because higher plants, still seem to be the "sleeping giant" in drug development. The distinction between medicinal and non-medicinal plants is highly lop-sided, because all of them are medicinal in one way or other. Our limited knowledge about their potential should not be an alibi for this sort of highly arbitrary classification.

At a time, when cure for diseases like cancer are elusive, and new scourges like AIDs are casting shadows on the survival of human species, there is a great need for us to preserve with medicinal plant studies in all its various aspects -- botanical, pharmacognostic, pharmacological, clinical etc., and to preserve the plurality of approach to human health care.

Unnerved by the predominantly antibiotic mode of treatment and the disastrous side effects of modern medicine, people, by and large, have now realised that 'natural is better'. Consequently, there is a palpable shift in public preference in favour of the traditional herbal medicine, throughout the world. They call it the 'green wave'. In our own country, we are witnessing the spectacle of mushrooming of Ayurvedic pharmacies in the recent times. Systems like Siddha, Unani and even Homeopathy have caught up very well with people. Eventhough the philosophy and concepts of many of these systems, like the 'Tridosa Siddhanta' of Ayurveda, are still out of bounds for modern scientific analysis, no body can wish away the fact that these systems have provided and continue to provide a healing tough to the suffering millions, in various parts of the world. Naturally, there are serious efforts, afoot to resuscitate and promote these 'natural medicines' which we hope will enable us to provide health for all by 2000 A.D.

But this is a destination which be at the farthest end of a road which is full of pot holes. Some of the hurdles are of very

fundamental nature. For example, sustainance of herbal medicine depends very much on the available medicinal plant resource base. How much of it is available now ? What do we know about their potential ? Are they available in adequate measure ? If not, how are we going to sustain the system ? These are all fundamental questions that should disturb us, because plant resources are the foundation on which the whole superstructure of these systems are constructed. Unfortunately, we are living in an age of environmental crisis, brought about mainly by forest and habitat destruction. This has resulted in the depletion of our medicinal plant stocks. Many valuable medicinal species have already become endangered. Several others are extremely rare. On a broader scale, out of the 15,000 species of plants, we have here in India, 3,000 - 4,000 species are now threatened, which is a pointer for the future scenario. The tragedy is that most of the medicinal plants are forest dwellers and many of them are averse to cultivation.

The most important point to be noted is that, as we progress, we are going to be more and more dependent on other organisms, including plants, not only for our food and medicine, but also for all other day-to-day requirements. That is why, it is being said that the future quality of human life here would depend very much on the existing biodiversity. Unfortunately, we have been on a way path with nature all along, with the intention of conquering it. By now, it is amply clear that it is going to be a losing battle.

The course of progress and development that we pursue now, is not sustainable in the long run, because, metaphorically speaking, we have been eating up the capital, instead of being contended with feeding on the interest. Sustainable development requires that we develop ways and means of very prudent exploitation of natural resources. So, unless we retrace from this perilous course of destruction and mayhem and strike a compromise with nature, we are going to be the vanquished. The writings on the wall is, by now, very clear. In this war of attrition, nature is going to have the last laugh and as all of us know, he laughs best who laughs last.

THANK YOU.

Incidentally, let me narrate the experience of a team of scientists from Trivandrum who went on a plant collection expedition to Agasthyar hills at the Western ghats, with the Kani tribals as their guides. In spite of the good food the scientists had consumed on their way, they were much tired, whereas the tribals looked fresh and even without taking any food. In fact, the stamina of the Kani tribals fascinated the botanists. The tribals offered a few fruits rom a plant to the exhausted scientists and the effect was sudden. They felt an exhilaration and the fruits gave their tired bodies a flash of energy and vitality.

The tribals were reluctant to reveal the identity of the fruit, pleading that it was a time honoured tribal secret. After a great deal of persuation, the Kanis led the scientists to a place called **Arogyappacha.**

Back at the labs, the plant was identified as **Trichopus zeylanicus** (Trichopodaceae). This plant has entered the modern pharmacopoea as a safe, antistress, anti-fatigue, restorative herbal tonic. The scientists are confident that it will replace the Korean ginseng, as the health food of the 21st century and it will soon be available in tablet, liquid or powder form.

The Ayurvedas searched the Ayurvedic texts for some information on this plant. They have come across descriptions of a plant which match with **Trichopus zeylanicus.** It could indeed be

the divine **Varahi** which was considered as the ultimate health tonic by Sushrutha, the father of Ayurveda. Many plants that grow around us are highly medicinal, but unfortunately unknown to many. I shall introduce a few such plants for information.

Punarnava (Boerhaavia diffusa - Nyctaginaceae), a very common annual weed seen during monsoon, is an important rejuvenative drug in Ayurveda. 'That which revives again' is the literal meaning of the Sanskrit word 'Punarnava'. Much recommended by Naturopathists for daily intake, this herb is widely used by Ayurvedists as a stimulant of heart, kidney and liver. Being a good diuretic, the roots boiled with milk, is an effective remedy for oedema. Recent clinical studies attribute anti-inflammatory, anti-arthritic, hypotensive and cardiovascular activities to the roots of Punarnava.

Brahmi (Bacopa monnieri - Scrophjulariaceae) is an important drug used in Ayurveda for improvement of intelligence and memory and revitalisation of sense organs. It clears voice and improves digestion. It could be because of these properties, that it is still customary in Kerala to give the juice of this plant to the new born babies. Many preparations made of Brahmi are available in todays' market. It is also indicated against bronchitis, dyspepsia, anxiety neurosis and insanity.

Mandukaparni (Centella asiatica - Apiaceae) is the herb used by the Physicians of North India in the place of Brahmi. Almost all the qualities of Brahmi are attributed to this plant also. It

improves the recepture and retentive capacity of mind. The whole plant is reported to be a nervine and cardiotonic. Clinical studies have proved its efficacy in improving the faculty of memory in mentally retarded children.

Amrta (Tinospora cordifolia - Menispermaceae) is a Hindu mythological term which refers to the heavenly 'elixir'which saved the celestial people from senescence and kept them eternally young. This term is attributed to this drug in Ayurveda, in ecognition of its capacity to impart youthfulness, vitality and longevity to the consumer. The mature stem is restorative, antipyretic, and an effective remedy for fever, jaundice, diabetes, skin ailment and neurological disorders. Recent studies made by some voluntary women movement establish that this drug is effective in various uterine complaints.

Charngeri (Oxalis corniculata - Oxalidaceae) is a small herb that gave solace to the house-wives in olden days. The whole plant boiled with buttermilk is a reputed home remedy for indigestion nd diarrhoea in children. It is a digestive stimulant and so beneficial in loss of appetite, dysentery and bileousness.

Karpooravalli (Coleus ambonicus - Lamiaceae) This aromatic plant is a common home remedy for infantile cough, cold and fever. Leaf juice mixed with little honey relieves cough, bronchitis and fever seen in children.

Aswagandha (Withania somnifera - Solanaceae) is highly esteemed as a rejuvenative drug which is capable of imparting long life, youthful vigour and intelligence. It is widely used as an aphrodisiac and in cases of anxiety neurosis. It improves physical strength and is prescribed in all cases of general debility. Because of the high medicinal values of this plant, it is even considered as 'Indian ginseng'. Common name : Winter cherry.

Amalaki (Emblica officinalis - Euphorbiaceae) A very important source of Vitamin C and a major ingredient in the renowned health tonic Chyavanaprash, Amalaki has become a synonym of total health. It is found to be effective in the treatment of peptic ulcer and dyspepsia. Juice of goosberry mixed with little honey and turmeric powder, has been found to be very effective in controlling diabetes.

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CONCEPTS OF FOOD, NUTRITION AND HEALTH IN ANCIENT INDIA

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I feel it a previlage to join the list of distinguished speakers who have preceded me in giving the Kamla Puri Sabharwal Memorial Lecture at Lady Irwin College. I would like to express my gratitude to those who have asked me to do so. For the last few years, I have been an avid student of the history of food in India, and indeed my book on the subject will be issued by Oxford University Press. What would strike anyone traversing this path would be the remarkable analytical insights that were evinced by our ancestors in these matters, to the extent that many experimental finding in recent times, whether of protein complementation, or of dietary fibre, or of linkages between body and mind through neurotransmitters, seem to have been traditionally understood and implemented. I would like to illustrate in this lecture the concepts that prevailed in the three related areas of food, nutrition and health.

SOURCES :

Of the three chief sources, the **Charaka Samhita** and **Sushruta Samhita** may both represent periodical redactions to a body of knowledge that was perhaps first put together about 400 BC and added to over eight centuries. The former is primarily a medical

text, the latter a surgical one. The **Charaka Samhita** is divided into eight major sections and 120 chapters, of which half are devoted to fundamentals (**Sutra Sthana**) and therapeutics (**Chikitsa**). It describes 200 diseases and 150 pathological or congenital conditions, and their treatment using 341 medicinal plants, 177 animal drugs and 64 mineral ministrations. The **Susrutha Samhita** is in six sections, all relating to surgery, it describes 101 blunt instruments (like forceps, catheters, rods and probes) and 21 sharp instruments (knives, scalpels, saws, axes, hooks), and has excellent procedures for several operations, eg. for the reconstruction of a nose using a skin-flap let down from the forehead, for kidney-stone removal, and for couching of the eye (the surgeon is advised to practice on grapes floating in water). There are specific diets for various bodily disorders such as diabetes, jaundice, tuberculosis and asthma that can hardly be faulted even today. The **Asthangahrdayasamhita** (Compendium of Science) of Vaghbhata, written about 750 AD, is a Buddhist ayurvedic text which is particularly good on food injunctions related to season. Many other sanskrit writers were polymaths, and even unexpected works, even the **Bhagavad Gita** of the Mahabharata, or Kautilya's **Arthashastra**, carry materials related to food and health.

In South India, ayurvedic concepts came with Aryanisation after about 500 BC. The 5th century **Kural** of Thiruvalluvar deals with the three chief concerns of man, which are love, knowledge

and health; it draws heavily on ayurvedic principles of moderation in eating, the patient-doctor relationship, and so on. A special contribution to ayurveda came from Nagarjuna of the 7th or 8th century AD who pioneered the use of metals in therapy, and invented black sulphide of mercury and several arsenicals for the purpose.

FOOD

Concept of food : In the Aryan ethos, food had a very exalted position. "From food are all creatures produced and by food do they grow. Man thus consists of the essence of food". Life itself was visualised as a tripod connecting body, mind and sprit, and an equilibrium of the body was the object of the science of life. "Without a proper diet, medications by themselves are of little use; with a proper diet, medicines are largely unnecessary". A balanced diet is essential to help maintain the equilibrium of the elements and appropriate physical excercise was part of the health package.

Food in the Aryan belief was not simply a means of bodily sustenance, or even of good health ; it was part of a cosmic moral cycle, and "the self consists of food, of breath, of mind, of understanding". In the cosmic cycle, the eater, the food that he eats and the universe must all be in harmony. It was food that gave rise after consumption to products as dissimilar as flesh, mind and waste (excreta). Disharmony between body humours was connected with cosmic factors, and good health represented a balance between various forces.

The humoral theory : Five states of matter were postulated, which when combined in the body engendered three dhatus. These expressed themselves in the body in three gunas.The dhatu pitta, loosely translated as bile, is expressed in the guna sattvik, which is manifested in qualities such as intelligence, sobriety and balanced judgement. Kapha, or phlegm, expresses itself in the guna tamas, compounded of courage and valour, but also in rash and mechanical action. The third dhatu, termed vatha or enthusiasm and energy,but also with excited action born of uncertain judgement. One of the best accounts of these correlation is found in the advice given by Krishna to Arjuna in the **Bhagavad Gita.** Foods also possess these same gunas and when eaten, engender them in the body. Since each of the six tastes is also believed to consist of a combination of two of the five states of matter, the taste or rasa of a food, no less than its inherent guna (heaviness, lightness, unctuousness etc) influence its behaviour in the body. Thus cold water when imbibed is kapha-inducing, but hot water, because of its guna of warmth, is not. Sattvika foods are tasty, nutritive and agreeable, conducing to serenity and spiritual qualities; they are exemplified by milk and its products, jaggery, honey, fruits and goat and sheep meats, chicken, eggs and wine.Tamasic foods are stale or "cold" foods, or highly-spiced items consisting of pork, beef and non-scaly fish, and strong liquor. Rajasic foods consist of bitter, salty, pungent and sweet materials, for example scaly fish, many spices like garlic and ginger, pickles, the amla fruit (nellikai) and mustard oil.

Natural temperaments or prakruthi are likewise of a sattvik, tamasic or rajasic cast, and the foods used must coutneract these traits. People with a sattvika temperament could use tamasic foods with advantage in winter, and rajasic types are assisted to a better harmony through sattvika foods. Rajasic and tamasic foods enhance restlessness and eroticisn, and are therefore banned for use by widows, students and the celibate in various rules of conduct laid down in the **Sutras and Smrithis.**

An important concept was that of agni, the digestive fire. gni brings about digestion which releases the rasas of food. Agni is different in each individual, and must be preserved at its peak. It is kindled by the use of ghee and light gruels, and weakned during summer, in certain diseases, after sweating, and when food habits are irregular.

The choice of food is strongly influenced by the season, and these injunctions not surprisingly were developed in North India where the seasons vary markedly round the year. In different seasons, both agni, and the three bodily gunas, alter. In the inter season, the digestive fire is believed to be at its height ; there are hardly any food restrictions and more food can be eaten without ill-effect. Sour, salty dishes of goat mutton, or roasts of watery or marshy animals like the iguana, or of birds or beasts of prey, new rice, sweet preparations, hot drinking water, and strong liquor were all recommended winter foods. In other seasons, levels of both agni and body doshas influenced the choice of food. Thus in spring, when kapha increases, sour, oily and

sweet foods were to be avoided, and barley, wheat, venison, hare, quail, porcupine and certain liquors were the foods of choice. In summer, foods that were a strain on digestion, like salty, sour and pungent materials, were best avoided, and cold, oily or fluid foods were the ones of preference, like barley with milk, or milk itself, rice, ghee and deer meat, with liquor taken after dilution. During the rainy season vatha increases : strong meat was undesirable, and the choice was venison with a boiled sauce, barley, wheat, old rice, and medicated types of liquors in small amounts with honey or wine. Finally in autumn, when pittha begins to rise, and agni is only moderate, ghee and other fats, and indeed even fried foods, were to be left alone; light, "cold" and bitter foods were to be consumed in moderation so as not to stifle the agni, and liquor was a normal component of the meal. Vaghbhata sensibly advises : "Together with friends, drink undiluted asava and arishta liquor, rum, wine and meat mixed with mango juice, but abstain in summer". While the "hot" and "cold" food concept was perhaps carried to fanciful extremes on paper, there is a good deal of practical commonsense in the seasonal food injunctions of the Aryan life style.

In a modern scientific experiment, human subjects given foods drawn only from a "cold" list were compared with others on "hot" foods, both diets being identical in nutritional terms. Less nitrogene was retained on the "cold" diet, excretion of sulphur was less, and the urine was alkaline, in contrast to the acidic reaction shown by the urine of those of "hot" foods.

Vegeratianism : The **Rigveda** mentions 50 animals as fit for sacrifice, and by inference for eating. This included horses, bulls, buffaloes, rams and goats. After the sacrifice, each carved portion had a specified recipient. For example, the right thigh went to the brahmin who chanted the mantras, and the two jawbones and tongue to the prastota priest. For a special guest, a large ox or goat was expected to be sacrificed. The great sage Agasthya is praised for his sacrifice4 of a hundred bulls in the **Taittiriya Brahmana.** Use of meat at a shraddha ceremony to one's ancestors was considered very meritorious.

Yet right from the start of the thoughtful Aryan had begun to question the taking of life for food with particular reference to the gentle and bounteous cow. The sacrificial cow was always specified to be a barren one, and the very earliest text, the **Rigveda** of about 1500 BC itself, carries two verses in praise of "Adithi, the cow, the sinless". In the **Shatapatha Brahmana** - 800 BC, the eating of beef is declared a sin, but this is under protest from the imposing sage Yagnavalkya who, after listening to 11 the arguments, declares : 'That may be so, but I shall eat beef if the flesh is tender". The Dharma **Sutras** begin to lay down penances for killing an ordinary cow, and stricter ones for a milch cow or draugt ox, so the vision is economic and utilitarian rather than humanitarian. By the time of the **Manu Smrithi** the list of forbidden meats is a very large one, and **ahimsa** or non-injury has entered the picture.

The battle of the Vedic sacrifice, it has been said, was really won by the Buddhists and Jains. Buddha was strongly opposed to ritual sacrifice, but did permit his followers flesh on occasion if the killing had been unintentional, and if the meat was received in the form of alms. The Buddhist emperor Ashoka powerfully propagated non-killing in his far-flung edicts, which had a salutary effect. The other new religion, Jainism, went to extraordinary lengths to avoid injury even to living forms that cannot be seen, like germs, let alone to large animals. From being simply one virtue of a priest, vegetarianism had come to form part of common consciousness. The three later Vedic schools of Shankara, Madhva and Ramanuja each got over the problem of the animal sacrifice by simply prescribing substitutes for the animal head, like round pumpkins, or coconuts smeared with vermilion, or animal shapes made of flour.

By 1000 BC therefore the vegetarian concept had become firmly established. But one should not forget that vegetarianism was possible in India because of the sheer abundance and wide range of food stuffs even then available. In fact, except for a few fruits and vegetables that came to India following Columbus and Vasco da Gama after 1500 AD, practically all the cereals (about a dozen of them), pulses (another dozen), vegetables, green leafy materials, fruits and milk, along with numerous spices, condiments and sweetening agents, were available even three thousand years ago, to fashion into vegetarian meals of high nutritional quality, and of gustatory and aesthetic appeal. It is doubtful if this was true anywhere else in the world till very recent times.

NUTRITION

Even the **Rigveda** has ahymn to nutrition, and terms for the concept of nutrition, as distinct from food, existed in such Sanskrit words as aharatattva, poshana, purshi and palan. To this was linked an important concept in the Aryan food ethos, namely its taxonomy of cooking. Cooking did not necessarily mean the use of fire or heat. In fact cooking without fire constituted a major division in the taxonomy of Vedic cooking, in which key concepts are fire, ghee, cultivated grains or anna, and uncultivated grains, collectively called phala. Both milk and ghee were considered to have already been cooked, and their presence ensured ritual purity in the food. Washing and peeling of fruits, or of vegetables to give a pacchadi, or pickling in the sun, would all fall into the category of cooking without fire to give edible products. Cooking with fire is of course a familiar concept, but there is a fine ritual distinction in the Aryan ethos in respect of ghee. This is of course the only fat that the Vedic Aryans would countenance, cooking with oil being left to the lowly. Again, if rice is added to boiling milk, and ghee and sugar added only later, what one gets is a dish called 'Doodhbhat'; but if the rice is first lightly fried in ghee, before boiling with milk and sugar, what results is a food which tastes similar, called kshira or kheer. The latter is a naturally superior pucca food, distinct from a restrictive kaccha food like doodhbath. What do these terms connote ?

Kaccha and pakka foods : Literally, kaccha means imperfectly cooked and pucca fully cooked, but both are really fully-cooked edible foods. The difference is a ritual one. Kaccha foods are basically those cooked using water, like rice, kihchdi, roti and dhal. These items are both pure and exclusive, and the cook cannot leave the kitchen till they have been cooked and served. Left over kaccha food must not be eaten later, being considered polluted, basi or jootha. Pucca foods are those cooked with ghee, and they can be carried outside the domestic cooking area; they suffer less restrictions, are less liable to pollution, and can even be shared across caste boundaries.

The microbiological implications of many Vedic injunctions are readily apparent. Boiled food is liable to much more rapid spoilage in a tropical climate than is fried food, and restricting it to the kitchen ensure freshness and freedom from pathogens. Fried foods on the other hand can travel, and even today orthodox families, travelling say on piligrimage, carry tins of fried food with them. The injunctions on cleanliness, to which a religious sanction was imparted, were also conducive to this end. Washing hands, feet and mouth before entering the kitchen for a meal, and through washing after the meal, so impressed early Chinese Buddhist travellers to India that they exhorted their countrymen to do likewise. Leaves, either used whole like those of the banana, or stitched together into a plate called patravali, or into leaf cups,were the ancestor of modern disposable materials, and less polluting than the latter on the environment. Clay cups

used for drinking, and in the old days, all clay dishes and plates, were destroyed after one use. Water was poured into the mouth to be drunk, and not sipped, as part of the saliva-pollution concept. Of course all drinking water was boiled and frequently perfumed before use (churnadivasin), as was also milk. The natural practices cannot be faulted in terms of hygiene.

Nutritional strengths : Many Vedic food practices are perceived as strikingly nutritious in the light of modern knowledge. The use of cereals and pulses in combination, either as rice-dhal or roti-dhal, or as composite dishes like idli, dosai, khichri or holige (poli), are now known to bring into effect protein-complementation that raises the biological value of the entire protein close to that of milk at a fraction of the cost, and in forms that please the palate. Extensive use from the very start of the Aryan food ethic, of green leafy vegetables, those store-houses of vitamins and minerals, is exactly what modern nutritionists urge. And what are our raw chutnies, pacchadis and kocchumbers but ways of ensuring no loss of vitamin-C through cooking, the salads of India ? Even pickling without the use of heat is generally applied to Vitamin-C rich fruits like the lime, green mango and amla(nellikai); it has been shown that retention of the vitamin-C in a morabba or salt pickle even over six months storage is exceptionally high. Sprouted grains, used since early times, develop tenfold levels of vitamin-C, and their B-vitamin contents are doubled : further, they are frequently eaten raw in the form

of a kosumalli or kosambri. Fermentation is another technique in which natural enzymes enhance food value. The prime example in the Indian diet is the daily use of curds, today as a healthy food. In making the idli, kadabu, dhokla and khaman, the fermentation step at the start after grinding not only enhances vitamin levels, but breaks down carbohydrates and proteins to more easily digested forms and releases ionisable-iron, while the final steaming step ensures a fluffly texture and organoleptic appeal. Puffing and parching of grains like rice and pulses have been shown to led to carbohydrate breakdown into forms that are more easily absorbed - and these are very old Aryan practices indeed. Parboiling of paddy to give the pulungal arisi of old Tamil literature seems to have been a contribution of the south, a practice of great nutritional import to rice eaters. Thanks to the wisdom of our ancestors who enjoyed the use of whole wheat, of hand-pounded rice, and of plenty of vegetables, problems of dietary fibre simply did not exist.

Balanced diets : We have already noted that moderation in food was enjoined by the fathers of Indian medicine. Two meals a day was the norm prescribed. The stomach was visualised as consisting of four parts : two could be filled with solid food, and one with liquid, always leaving one part empty for the movement of gas. Two examples will show how modern were the concepts. Sushrutha lists the articles of food (which he termed pathyam) recommended for everyday eating because they were lgiht (laghu) and generally wholesome. These were aged winter or shali rice, barley, mung dhal

(we know that this is the least flatulent of our common pulses), deer meat (this flesh always had a very high place, for reasons that we do not yet understand), butter, amla, rock salt, honey and rainwater (doubtless for its purity). We could hardly better the list today. Incidentally, apathyam foods included the radish, jackfruit, beef, seasalt and sheep ghee, and intake of these foods needed to be carefully regulated. In the **Arthashastra** of Kautilya, a manual of statecraft written in 300 BC about the time of Alexander the Great, a "Genmtlemen's daily diet" is laid down as one prastha of rice, one-fourth of a prastha of dhal, one-sixth of a prastha of oil and one-sixtyfourth of a prastha of salt. The weight of a prastha is uncertain in modern terms, but the relative proportions accord well with current thinking.

The individual prakruthi or temperament, the agni of each person, and the taste of each item of food influenced both the kinds of food recommended as well as its quantity. In the event, food in the Indian ethos, apart from its spiritual connotations, was of both nutritional and gustatory excellence.

HEALTH

The practice of Medicine : Sushrutha defined health as an equilibrium of agni with the doshas and dhatus, along with happiness of mind, soul and sense organs.Ayurveda had therefore a thoroughly holistic view of health, but nevertheless a practical one. In fact the Sanskrit medical writings are totally devoid of reference to holy writ or to socio-magical ritual. Repeatedly

the experimental method of direct observation is stressed, such as careful palpation of the body by the physician.Everything had to be supported by reason and observation. The way to increase knowledge is by discussion with people of experience. In the practice of medicine and surgery, diet, as we have already noticed, was given pride of place. However the germ theory of disease (germs were called krmi) was well recognised in terms of infection. Even the red blood corpuscle is described as being club-like in one dimension and disc-like in another, truly a remarkable insight in pre-microscopy days. Mild medication was preferred to strong dosage. The emphasis on breast milk is surprisingly modern. Prescriptions for administering of drugs on an empty stomach, or pre - or post prandial, or along with a meal in many different ways, are well in line with modern practice. Two practical tests are of great interest. One is meant to detect poison in food by antimony compounds, or green for boron. In another, the specific gravity of urine from a patient is determined using a drop of oil gently placed on its surfaces an aid to diagnosis. Sushrutha was well aware of the sweetness of diabetic urine, which it was noted ants would swarm to: he recommended that affluent diabetics walk twenty yojanas (about 8 km) a day or practice wrestling or horse - riding, while warning the thin diabetic not to exert himself too much. Indeed the dietary injunctions for various ailments can hardly be bettered even today. For biliousness, it was coconut water; for fever, thirst and indigestion, barley water, and for dysentery, milk.

Milk was also recommended for hyperacidity, and taken warm at night with sugar and honey for insomnia. Tuberculosis called for a rich meat diet,and asthma for meat soups with plenty of salt, ghee and acid juices.Dyspepsia meant fruits, cooked roots, and tasty beverages. Sugar was toboo in diabetes for which a series of herbal extracts were prescribed.

Yet another concept cardinal to ayurvedic practice is that of fasting. This was the ultimate in therapy or medicine since it both reduces and purifies the dhatus. Fasting did not mean total abstinence from food; usually it implied restrictive eating, such as only of fruits.

Of the 341 medicinal plants described as drugs, have any stood the test of modern pharmacology and medicine ? Perhaps the most striking has been the development of the hypertensive drug reserpine from the sarpagandha, **Rauwolfia serpentina**. From the tubers of several **Dioscorea** species can be extracted sapogin, a versatile precursor for several drugs including an oral contraceptive pill. The root of the common wild plant **Vinca rosea**, now termed **Catharanthus roseus** (with pink or purple flowers) yields two alkaloids, vinblastine and vincristine, which in turn yield drugs used in treatment of Hodgkins disease, acute leukemia of children, and cancer. From **Commiphora mukul** exudate have been obtained both sallaki, for use in arthiritis, and guggulipid, now widely used in coronary arterial disease. The asmagguptha of Vedic terminology is **Mucuna prurita** which contains natural L-Dopa,

useful in Parkinson's disease. Forskolin is the active principle of **Coleus forskohlii** and is a hypertensive and sedative. Composite ayurvedic medication in commercial use include Liv-52 for liver protection, and Plus-30 and Chyavanpras as general restoratives and tonics.

Of the many natural materials traditionally used against diabetes, modern science has so far vindicated fenugreek (methi) seeds as effective both in insulin dependent and non- insulin dependent diabetics. Other naturally occurring compounds that have long been household remedies are isabgol **(Plantago ovata)**, the husk from the grain of which induces persistalis and acts as a mild mechanical laxative, and in dysentery and diarrhoea though its water absorptive power. Sennapods and leaves carry acathartic alkaloidal principle which is now a commercial commodity. Coconut water has ayurvedic status in kidney conditions, which are well supported by its very low sodium and high potassium content, and the fact that it is isotonic with serum and body fluids. The concept of rapid wound-healing called vrana-ropana by Sushrutha, is being revived at the Institute of Indian Medicine in Varanasi, and a ghee medicated with jasmine flowers (jathi) has shown excellent results in rapid healing of ulcers,burns, abscesses and surgical wounds,and somaraji (**Vernonia cinerea**) extracts in skin wounds. Garlic pills are now common use for lowering serum cholesterol levels, and turmeric extracts have shown pronounced anti-inflammatory action in arthritis.

Various parts of the neem (leaves, fruit, and oil) are being recognised in skin diseases, dental conditions, and as spermicides, and above all as powerful and yet biodegradable agricultural chemicals that have even been accepted by the Environmental Protection Agency of the U.S.A.

The cardinal Ayurvedic principle that mind and body are closely connected in receiving substantial support. The neurotransmitters represent molecules that can encode information and transmit it throughout the body. Though chemically nothing but carbohydrates or peptides, they appear to correspond to distinct mental states like drowsiness, anger, contentment, and even schizophrenia, and can transmit such mental states across synapses to receptor sites. Four major biogenic amines, namely dopamine, norepinephrine, epinephrine and serotonin, affect normal emotional behaviour. Thus eating carbohydrates has been shown to raise the level in the brain of serotonin, which is associated with relaxation and sleep. Hot milk and honey have the same effect. The nervous system is now found to have links with the immune system,the circulatory system and indeed all body functions, through monocytes which are white blood cells that move all through the body, flooding it with awareness of the brain's thoughts. The ayurvedic holistic concept, that the body is totally integrated and must not be treated piecemeal but in terms of basic causes, seems to be receiving vindication. To quote :"Life is spoken of as the union of the body, mind, sense and spirit. The body, mind and spirit together are, as it were, the tripod. The

body and the mind are both considered to be the abodes of disease, likewise of well-being. The cause of well-being is their harmonious and concordamt interaction. The cause of disease, psychic or somatic, is either erroneous, absent or excessive interaction. The morbidity of the body is remedied by medication, the morbidity of the mind is spiritual knowledge, philosophy, fortitude, remembrance and concentration".

Considering the limited knowledge of physiology and human metabolism available two thousand years ago, the concepts of ayurveda represent a remarkably cogent attempt to weld together experimental observation, theory and practice into an integrated whole. Modern thinking may differ on the high place given to ghee or to deer meat or to honey (which was actually recommended for diabetics), but there may still be something to learn about seasonal foods, incompatible foods, prescribed foods, individual food idiosyncrasies, fasting, integration of types of cooking with health, and, in the area of medicine, about drug concepts as much as of drugs themselves.

THANK YOU

PRODUCTION AND USE OF HEALTH GIVING HERBS

Dr.Thimmaraju

INTRODUCTION :

The practice of herbal medicines dates back to the earliest periods of roman human history. There is evidence of herbs having been used in the treatment of various diseases and for revitalizing body systems in almost all ancient civilisations. Such herbal cures may have a significant role in modern times. They are increasingly being used in cosmetic goods, and as alternative medicines. Herbs can be used in many different ways but in any case, they should interact directly with the human system. Once absorbed in the blood stream, they circulate to influence the entire system. Thus the skill of a herbalist lies in using this effect to balance and strengthen the body's own healing mechanism instead of suppressing or disturbing it, as many modern drugs do. The list of herbs that have medicinal properties is extremely long. However, an attempt has been made here to highlight the medicinal values of a few important herbs. Some of the most common human disorders have been selected for the purpose of demonstrating the medicinal usefulness of the herbs.

1. **Digestive Disorders :** Several herbs are known to cure digestive disorders arising due to various reasons. For instance, pepper, ginger, cummin, curry, clove and cinnamin are widely used in this regard. Pepper has a stimulating effect on the digestive organs and produces an increased flow of saliva and gastic juices.

It is an appetiser. A quarter tea spoon of pepper powder mixed in thin butter milk can be taken during indigestion or heaviness in stomach. Ginger is another known herb known to cure dyspepsia, flafulence, colic, vomiting, spasms etc. Half a tea spoon of fresh ginger juice mixed with 1 tea spoon each of fresh lime and mint juices and a table spoon of honey constitutes an effective medicine for dyspepsia, nausea and vomiting. Chronic diarrhoea can be cured by the juice or dry powder of turmeric mixed in butter milk or plain water. Garlic aids in elimination of noxious waste matter in the body. It stimulates secretion of digestive juices.

Fenugreek : Leaves for indigestion and flafulence, seeds boiled & fried in butter, seeds for colic flafulence.

Cumin : Seeds for indigestion, dyspesia, diarrhoea, flafulence, colic. 1 tea spoon of cumin seeds boiled in a glass of water and decoction mixed with 1 tea spoon of fresh coriander leaf juice and a pinch of salt.

Curry leaves : Fresh juice of curry leaves with lime juice and sugar for nausea and vomiting.

Clove : Promotes enzymatic flow and boosts digestive functioning.

Cinnamin : Checks nausea, vomiting and diarrhoea. 1 table spoon cinnamin water after meals relieves flutulence and indigestion.

COUGH AND COLD

Pepper	:	20 gm of pepper power boiled in milk with a pinch of turmeric power once daily for 3 days.
Ginger	:	Ginger tea for frequent colds and associated fever. Juice of ginger with honey 3 to 4 times / day for cough. Small pieces boiled in a cup of water, strained and taken with 1/2 tea spoon sugar for colds.
Turmeric	:	1/2 tea spoon fresh turmeric power mixed in 30 ml warm milk for cough and throat irritations.
Cumin	:	Diluted cumin water is an antiseptic beverage. Jeera water with ginger for colds associated with sore throat.
Clove	:	Chewing with a crystal of salt eases expectoration, relieves irritation in throat, stops cough. 3 - 5 drops of clove oil with honey and clove of garlic helps alleviate painful spasmodic coughs in TB, asthma and bronchitis.
Cinnamon	:	Powdered cinnamon boiled in a glass of H_2O with a pinch of pepper powder and honey for influenza, sore throat, malaria. Cinnamon oil mixed with honey for colds.
Asthma	:	(Turmeric, garlic and clove).

Turmeric : Tea spoon of powder in a glass of milk 2-3 times everyday. Best on an empty stomach.

Garlic : 3 cloves of garlic boiled in milk every night.

Clove : 1 tea spoon of decoction by boiling 6 cloves in 30 mls of water and honey taken thrice daily as expectorant.

DIABETES

Fenugreek : 2 tea spoons of powdered seeds mixed in broth or milk taken daily.

Curry : Eating 10 fresh fully grown curry leaves every morning for 3 months prevents diabetes.

OTHERS

1.	Muscular pains	-	Pepper
2.	Teeth disorder Pyorrhea	-	Pepper
3.	Aches & Pains	-	Ginger
4.	Wheezing cough, blood disorder, wounds & ulcers, diptheria, rheumatism, heart attack	-	Garlic
5.	Anaemia	-	Curry leaf, turmeric and fenugreek
6.	Measles, sprains, boils, sore eyes	-	Turmeric

SHODHINI -- HERBS AND WOMEN

Ms. Philomina Vincent

BACKGROUND :

Most poor women have no access to good health care. Allopathy has not much to offer -- the whole system is loaded against women. For eg ; they do not even mention the problem of painful periods in their books. So it was felt that an alternative had to be searched. A lot of health care work is being undertaken by the voluntary sector but usually we find that women are mainly looked upon as mothers and child birth is considered to be their main problem. They are not seen as individuals. We too, quite often, are afraid of our own body and are not so kind towards it.

In this context, Shodhini emerged through a national consultation of women's groups working in the field of health. The consultation, held in Tamil Nadu in October 1987 brought together women's health activists both, rural and urban, from all over India to discuss the state of the art in women's health. The discussions revealed that the interests of the urban and rural women are totally different. The urban women are keen to learn about the use of traditional remedies and plants in women's health from their rural sisters. The rural women on the other hand wanted to learn about modern developments in health, they wanted information that they had no access to. The discussions further revealed that there existed very little knowledge about systems other than allopathy for treating women's common problems. Women's native knowledge for managing their own health problems is dying out. On the other hand, the health care delivery system fails to reach the vast majority of Indian women, inadequately staffed government health facilities, a health care system targetted at family planning and population control policies, indifferent and sometimes even hostile personnel manning (literally) the primary health centres, all this and more is making programmes for women's health, a mockery. In the reality of this situation, the women's health activists mooted that alternatives need to be created to make quality care available for women. The activists argued further, that traditionally, women have been health care providers. The patriarchal forces have succeeded in reducing their roles and pushing them into subordinate positions within the heirarchy of the medical system. Women therefore need to reclaim their power and assume their rightful place in the heirarchy.

This consultation led to the formation of a small group of women under the banner of "Research Action on Alternative Medicine and Women's Health". This group consisted of women from grass root organisations (like Deccan Development Society, Action India, SRED, Eklavya) from support organisations like CHETNA and from Women's Research and Documentation organisations like Jagori, Anveshi, Shakti.

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To sum up, Shodhini emerged as a collective effort to create an alternative for women's health, an alternative which seeks to :

(1) Increase women's control over their own bodies and their own health by training local women in simple gynaecology.

(2) Empower women by validating their traditional knowledge and enhancing its status through the tools of modern scientific knowledge.

(3) To increase women's control over technology and over resources by growing medicinal plants.

OBJECTIVES :

To realise the above goals, our specific objectives in Shodhini were as follows : --

(1) To validate (or otherwise) local healers' traditional remedies for women's common health problems.

(2) To disseminate the validated knowledge widely, so that women can treat their own symptoms with substances easily available to them.

Shodhini's work moved through three distinct phases. The first was the collection of information on plants commonly used for women's health problems. The second was, training the local women's health workers in gynaecology based on the self-help approach. And third was to test some potential plants in a systematic way at the community level.

METHODOLOGY :

In nine different field areas from all over India, local traditional healers were contacted by members of Shodhini. Through indepth interviews, information was elicited from them on local treatments for specific women's problems. This way of approaching the task of data collection, led to a problem. Women had different ways of referring to their problems, they had their own terminology. The group thus decided that the unit of data collection needed to be the plant.

An information sheet was established. This provided all the essential information on a particular plant : its local name, part used, method of preparation, symptoms for which it is used, etc.

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SHODHINI MEMBERS	FIELD ORGANISATION	STATE
Bharati	Sutra Mahila Samakhya	Himachal Pradesh Banda, U.P
Sarojini	Vikalp	Saharanpur U.P
Anu Gupta	Ekalvya	Madhya Pradesh
Uma Maheswari	DDS	Andhra Pradesh
Philomena Vincent	Aikya/SHSD	Karnataka/TamilNadu
Smita Bajpai	SWDF	Gujarat
Renu Khanna	Sarthi	Gujarat

The healers were also asked to collect specimens of the particular plants. Herbariums of these were prepared and indexed systematically. The data collected in this way was triangulated through field visits to the forests with the healers. They were asked to point out the specific trees/plants which has medicinal values. Complete information, according to the headings on the information sheets, was then elicited for each such tree.

The information sheets and the classified herbariums were sent to the botanist and physiologist, who is a part of Shodhini. She provided the botanical name for the plants and verified their medicinal properties and whether they could be effectively used for the symptoms specified by the healers.

Shodhini members who had collected the information from their field areas also did a validating exercise at their own level for their learning. By referring to the Indian Materia Medica they were able to satisfy their own curiosity about the efficacy of the plants used in their respective areas.

Though the members had come from various organisations, they had come in a personal capacity. After the initial stages, few members also dropped out.

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For us in Shodhini, our primary task was to go to the villages and identify the traditional healers who use herbal medicines and learn from them. Thus, we wanted to increase our own indigenous skills and decrease our dependence on doctors.

We were actually apprehensive in the beginning -"Where and how will we find such healers ?". But it was Rina who pushed us -- Thus began our effort at documenting the knowledge, collecting the various plants and sending them to the research centre in Kottakal in Calicut. There a botanist -- Indira Balachandran, found the botanical names for them and checked on their properties.

The completed and verified information sheets were then fed into the computer. After 18 months of painstaking field level data collection and subsequent verification, 499 entries were made into the computer. These corresponded with about 300 plants. Along with the botanical names, the other units of information were the properties of the plants and the symptoms for which each could be used. The information was then checked against the existing literature. The plants which were mentioned in the literature for a particular symptom were categorised as "A". In our sample, were found out 150 "A" remedies. That is, they did find a mention in the existing literature. The remedies which were not confirmed by the existing literature, but because of their properties, did have a potential for women's problems, were categorised as "B". Our sample had 150 "B" remedies. Very few items, 14 out of 499 were "C" remedies. They were either dangerous or toxic. Quite a number of remedies in our sample found a mention in more than one field area. This factor too increased the validity of these remedies.

It took us almost 2 to 2 1/2 years to collect this information and we collected over 300 plants. Some of the plants were common in various States all over India and were being used as medicines. So, their credibility increased. This also revealed that these illiterate women had considerable knowledge.

The plants were put under 3 categories.

(A) Plants that were mentioned in the books. Their validation is ensured because the establishment accepts something only if it is listed in the books. We called it category "A".

(B) Those that were not found in any books but had been found to be safe in use after being used for a long duration. This was categorised as "B".

... 5

(C) Plants that were used for contraception or abortion. There were 8-10 such plants. But we had to be cautious about them because reproduction is a sensitive area.

Through Shodhini, we were not merely gathering and sharing knowledge but were trying to understand our bodies, taking a holistic view of health - not viewing women as cases but as persons and enabling the healers to become barefoot gynaecolgists.

The healers also learnt from us -- no one had given them any importance till now, so when we learnt from them, they were also ready to be trained in the self-help approach.

SELF-HELP APPROACH

We had decided to be in charge of our own bodies. Hence, we had to begin to accept that our bodies are beautiful and healthy though this was difficult initially. We did not start from disease, but from our own bodies. In the beginning, we had some fear, some sense of shame -- all thanks to patriarchy.

Rural women were quicker to learn and we, the middle class women were more resistant. We were asked to look at our own vagina in a mirror using a speculum -- when we got over our initial inhibition, the experience was very liberating -- we were asked to undress and exlore our bodies. Rina took the initiative and undressed herself and asked others to examine her.

We found that many myths had no basis. There is no such thing as an ideal breast or a normal vagina. Every breast is normal and every breast is different. There is no standard.

Even in menstural cycle there is no standard normality. 25 days is normal and 35 days is also normal.

With this much of understanding, we passed on to phase B of our programme which dealt with plants of category "B". We used to have one workshop every month in which we exchanged our experiences.

Whenever any woman came with some problem, she was first observed very carefully -- how she was walking, her posture, how she sat down etc. All this holds a lot of significance.

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Then, besides her physical complaint, we would talk to her at a personal level, her life since childhood, any problems in her family, any oppression, any event which affected her emotionally, any death etc. A lot of things came out in this session and utlimately we found that most women did not need any trestment at all. They had no disease. In 90% cases, the problem was poor nutrition and this we could deal with.

After this, there was the actual physical examination.

(A) Mirror and Speculum.

(B) Examination of vaginal secretions by using gloves
-- we identify them by their smell, colour etc.

We have found that neem leaves are very effective and stop the infection in case of vaginal infections.

Since mal-nutrition was the main culprit in 90 % cases, good food for women as a matter of right was propogated. Why eat the left overs ?

Gradually, we in our own team also stated trying these herbs. One Shodhini team member had suffered bleeding for 15 days in a month for almost 15 years. If she has gone to a doctor, she would have probably been diagnosed as being afflicted with cancer. Being married and with children, she was under great pressure of work and was not having sufficient nourishment. She was asked to eat green vegetables and a lot of green gram. And she had no excessive bleeding after a month of consuming such nutritious food. Thus, we all developed more faith in this system. Sometimes, the healers recommended meditation as a cure and it worked well.

SELF-HELP PHILOSOPHY AND WOMEN'S EMPOWERMENT :

Within eighteen months of starting the self-help groups, these groups had to a large extent acquired the salient characteristics underlying the self-help philosophy.

The members were addressing themselves to not just the physical health problems but were providing support to each other at deeper psychological levels. They were responding genuinely to each others' needs.

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The groups used the resources of every member for training. There were some in the group who were excellent at massaging. They led the session on these. Some of the WHW'S were eager to learn and practice in the field ; they moved faster than others and soon assumed the positions of resource persons in the group. Within six monhs, the hierarchies in the groups melted and the participants moved towards the situation of greater equality.

The self-help groups also provided the members with a greater choice of alternatives for treatment from traditional medicines, massages, relaxation and imagery exercises, meditation, nutrition to allopathic solutions. Complementarity of treatments was stressed rather than any one approach being singled out.

Above all, the self-help group was instrumental, in changing radically the participants' perceptions of themselves and their relationships to their bodies. After the initial shyness and awkwardness of looking at themselves had worn off, most participants allowed their wonder and curiosity to surface and finally concluded that their bodies were beautiful and unique. Some of us middle class women broke myths of a different kind. We had thought that our village sisters would have dirty, smelly gentials because of lack of adequate water and privacy in the villages to clean themselves fully. We were surprised and ashamed at our own sense of superiorty to find that rural women had bodies as clean (if not cleaner than ours !) .

MAJOR LEARNINGS FROM THE SELF-HELP APPROACH : -

Shodhini members evaluate their experience with the self-help approach : --

(1) It has broken the myth, that illness has to be treated only by a doctor, given me the confidence to know, to feel and to understand my own body, its rhythm, its healing powers, and the value of herbs in helping one to be in charge of oneself and not fully dependent on external expertise only.

(2) Helped me to learn how to deal with most of the common woman's complaints ranging from white discharge, excessive bleeding, back pain/stomach pain to minor infections of the vagina. Also I was surprised to learn that at the end of our 3 years' action research it was proved that 90% of women's health problems are linked to nutrition, self-acceptance and personal care and don't need a gynaec most of the time.

... 8

(3) Gave me personal experiential undestanding of the holistic approach and value of working towards better health and well being and not just cure for women's diseases.

(4) The self-help approach provided an excellent opportunity and a system of developing ordinary non-literate women healers, into becoming barefoot gynaecologists. This approach offers an exiting alternative to the expensive and ineffective health care now available through allopathic system and use of drugs primarily for every complaint and illness.

(5) Enabled me to understand and work with the physical component in women's empowernment, (i.e.) better body awareness and capacity to accept it as a resource and a friend and break out of the patriarchal stereotypes ascribed to woman's body, the resultant attitude of shame, fear and anxiety about one's reproductive system and sexuality in general.

(6) Affirmed my role in being able to work with other women more freely and joyously in the task of empowerment and social justice.

VISIBLE AND SIGNIFICANT OUTCOME :

As Rina Nissim has so successfully outlined, "Today these women healers who are spread across India from Andhra Pradesh, Karnataka, Uttar Pradesh and Gujarat are able to distinguish a vaginal discharge due to anaemia, vaginal infection due to excess of "heat" (acid) in the body. They can differentiate between heavy bleeding with or without fibriods. They are comfortable with giving advice about diet as well as with simple remedies. They have been able to pass on to more difficult areas like bleeding in mid-cycle (Oestrogen aor Progesterone deficiency), irregular cycles leading to infertility and all this without leaving aside the personal problems. They have become trustworthy barefoot gynaecologists with the confidence of the experience they have gained through their own health problems. This is the success of the self-help approach !"

In conclusion, after 5 years, we have now a number of trained bare-foot gynaecologists, some of them are health workers and have regular practice. They have very rightfully begun to charge professional fees in their practice. In Karnataka, we have about 6 workers. We are trying to document all the information and publish it in the form of a book. One of the outcome is that there is climate and a desire for the use of herbs. Herbal

...9

gardens have been set up. The quality of life of these full time healers is going up. They are getting empowered.

And more than anything else, the Shodhini experience has taught us to be humble. We have learnt to learn from the resourceful women in our villages.

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DRA -10.

United States of America

In the United States of America, herbal remedies are referred to as homoeopathic remedies. All such remedies, because these are offered for treatment of a disease, are regarded as drugs. This means that if a herbal remedy is included in the United States Pharmacopoeia, the official Homoeopathic Pharmacopoeia or the National Formulary, it will be recognized officially as a drug. If it does not appear in any of these official compilations, it will still remain a drug but not an officially recognized drug.

The only way that a drug is approved for its intended use in the United States of America is by approval of a new drug application by the Food and Drug Administration. Up till now, no homoeopathic drugs have been approved for administration under a New Drug Application. This however does not necessarily mean that it is illegal to market these herbal preparations. These could be marketed without the approval of the Food and Drug Administration in certain circumstances. All marketed drugs have to be listed with the Food and Drug Administration.

The position in the United States of America is that there are many homoeopathic preparations in the market which have not gone through the process of approval by the Food and Drug Agency. Some of these may be mentioned in the pharmacopoeias concerned or in the national formularies. If so, these homoeopathic remedies are officially recognized but not officially approved for marketing. They are however marketed but not illegally. They are marketed as homoeopathic remedies recognized (if it is in the Formulary or Pharmacopoeia) but not approved for marketing. It is not illegal for use.

The United States Government did not, up till now, stringently regulate the use and marketing of homoeopathic remedies because, in the past, these have really been marketed only by a very few manufacturers on a very limited scale. These firms have been serving the need mainly of homoeopathic practitioners who needed these medicines. Further, these medicines have little or no labelling for the consumer. The labels were intended for use by the homoeopathic physician who would make a diagnosis and then either dispense the homoeopathic medicine himself or give the patient a homoeopathic prescription. The patient could have that prescription made out at a homoeopathic pharmacy.

It is difficult to know whether this system is largely used for what is commonly known as homoeopathic medicines i.e. small dilution of substance prescribed in the science known as homoeopathy founded by Hanneman, or whether it is also used for medicinal plant medicines and, if so, to what

Source - Herbal medicine for human health
Dr. Ranjit Chowdhary
Regional publication, SEARO, No. 20.

extent. In other countries, herbal remedies are not known as homoeopathic drugs which, in fact, are not herbal. In the United States of America, the Act is labelled as Homoeopathy but covers herbal products. It may look confusing but is in fact quite clear.

There has, however, been a change in the use of homoeopathic medicines in the United States in recent years. The number of firms marketing homoeopathic drugs has increased. There has also been a great increase in the promotion of homoeopathic medicines. There has been an increase in the marketing of homoeopathic medicines as "over the counter" (OTC) drugs to be sold without prescription. Some of these homoeopathic drugs – whether strictly homoeopathic drugs or herbal remedies – are being marketed and promoted for use in serious conditions such as cancer and multiple sclerosis.

In these changed circumstances, it is expected that regulatory control on the use of herbal remedies in the United States will be changed and made more stringent in the near future. The change in the use of herbal/homoeopathic medicines was in fact documented by an inspection survey of homoeopathic practices in the USA, carried out by the Food and Drug Agency in 1981.

To summarize, in the United States, there is at this time minimal control over marketing of products from medicinal plants. A plant substance, whether listed in the pharmacopoeia or not, could be marketed in the country without approval from the Food and Drug Administration. The producer would need to list the substance, however, with FDA. This system has worked so far because it was used with care largely by practitioners of Hanneman school of homoeopaths. The situation has changed with large-scale production of actual medicinal plants as therapeutic agents, of more widespread use of Hanneman's homoeopathic medicines as "over the counter" medicines and by promotion. In these circumstances, it is inevitable that the regulations governing the use and marketing of herbal remedies, will, in the near future, become more stringent.

Australia

Regulations controlling the use of herbal remedies in Australia will be discussed in two parts. In the first section, the system which is being used in the state of Victoria (and has been used for the last 50 years) will be presented. Australia is moving to a central control for the regulation of import, manufacture and registration of drugs which would include herbal remedies. The new system will be operating for the whole country by the time this book is published. The regulations relating to these new regulations will be discussed

in the second part of this section. The reason why the present system in Victoria state is dealt with (even though it is being given up in Australia) is that it contains much to commend and the Victoria model will be considered with interest by countries trying to develop regulations of their own, both for synthetic drugs and for herbal remedies. Only control of use of herbal remedies will be discussed below.

In Victoria, all herbal remedies sought to be sold in the state have to be registered and the person selling that particular medicine has to apply for registration to the state drug authority. This application is then considered by an expert advisory committee which evaluates all applications using the criteria of quality, safety and efficacy.

The general rule appears to be that if a herbal preparation is not thought to be toxic and there is no clear evidence of efficacy, then registration is given to the plant substance provided that no claim is made citing the efficacy of any ingredient in the preparation. If any such claim for efficacy is to be allowed to be made to the public, then the committee has to be satisfied, from the clinical and scientific data provided, that the substance or ingredient has been shown to clearly demonstrate efficacy.

The toxicity of a herbal preparation governs the scheduling of it and hence its labelling and distribution as provided for under the Drugs, Poisons and Controlled Substances Act rather than being a prime consideration as a therapeutic substance or medicine in terms of its registration under the Health Act. Such registration still requires proof of efficacy before it can be given. This applies to the plant substance or any part of it intended for therapeutic use.

If there is one constituent in a combined herbal preparation which is known to be active whereas no such evidence has been shown for the others, then it must, for those other constituents, be clearly stated that those ingredients form part of a base containing those plant substances. It is clearly implied that these substances are just there – and that there is no evidence that these additional substances or plants either add anything or substract anything from the preparation.

The drug registration authority will usually not register any herbal preparation which does not contain at least one substance known to be effective and accepted as such by the Victoria Drug Regulatory Authority. A plant substance or a combination of plants – all of them not known to be toxic – and none of them having shown to be effective to the satisfaction of the authorities will not be registered and thereby not allowed to be sold in

the state of Victoria. This is where the Victoria Drug Regulatory system is perhaps superior to other existing systems and will not allow unnecessary harmless but ineffective herbal medicines to flood the market. This may prove attractive to other countries formulating, at the moment, regulations for the use of herbal remedies.

The guidelines issued by the Victoria Drug Regulatory Authority for Chinese and other Asian herbal ingredients may be of interest to such countries and is therefore reproduced below.

> "The identification of the constituents of many herbs used in eastern medicines has often proved difficult. Applicants will need to furnish chemical data to assist the Committee as information from local sources is elusive. Toxicity and efficacy data are expected where a claim is to be attributed to these ingredients. The Committee observes that many of the claims made for eastern medicines are exaggerated and are not acceptable. Foreign languages used on labels and pamphlets must be an accurate translation of the English language text".

If a herbal remedy is being sought to be used as a prescription medicine for a specific disease, the New Drug Application will be reviewed for efficacy and toxicity and quality in the same way as any synthetic drug.

In the United Kingdom, an anomaly exists as regards herbal teas and foods containing plant substances to be used for medicinal purposes. As long as the label does not specify the purpose for which these teas and foods are to be used, no registration is required. Teas and food being sold for the same purpose do not need to be registered if the labelling does not indicate the medicinal value of the package. This again is not completely logical as the teas, for example, would be taken by people for the same complaints and the toxicity of tea, if any, will be the same, whether the label indicates the therapeutic indication or not. The indication for use of a medicinal tea has little to do with the possible side-effects which could be induced by that particular tea.

The ease with which a herbal remedy is administered in humans in China and the rapidity of the transition from folklore use or use in a particular region to clinical evaluation is also not fully understood. A combination of plants, or single plant, which may be effective, may also induce serious side-effects and some toxicological studies need to be carried out before administering the medicine to the human for the first time under controlled conditions.

In the United States of America, there is a legal requirement that all drugs have to be approved for their intended uses through the approval of a New Drug Application (NDA) by FDA. Herbal medicines are drugs because these are used for the treatment of disease conditions. Yet, homoeopathic drugs, which include medicinal plant products, are legally allowed to be marketed, and, at this time, are also being promoted for use, without this being frowned upon. All that is required at this time is that all such medicines marketed for use are listed at the Food and Drug Administration "Y".

In Australia, when the new regulations come into effect, it will be possible only to "list" a new herbal remedy for conditions such as diarrhoea or for dissolving kidney stones without demonstrating any efficacy provided there has been no indication of toxicity. This may lead to a plethora of harmless but useless medicinal plant substances being approved for sale.

In spite of a few existing anomalies in the regulations of all countries, the broad general approach appears to be similar. Generally, countries are not much interested in regulating herbs and plant substances being prepared and used by individuals on a small scale. When such substances are packaged for use as teas or foods, the regulatory agency would like to be kept informed of what is happening and may or may not have a system of registration for these. When a herbal remedy has been in general use for a long time and is being used for a long time in the country, the regulatory authorities do not want to interfere or regulate the use of such a medicine. If a new substance is sought to be introduced for use in the modern system of allopathic medicine, the requirements in this instance will be the same as would be for a new synthetic substance.

It has sometimes been stated that the stringent requirements needed before clinical evaluation of traditional medicines are a constraint in the search for new medicines. While this may perhaps be true in a particular country, there is no evidence that generally the new drug regulations in countries act as such a constraint.

Past experience, in fact, has shown that national drug regulatory authorities are willing to discuss early clinical evaluation of possible new herbal remedies without fulfilling all the statutory requirements as regards prolonged toxicological studies on different species of animals and associated pharmacokinetic studies. It is, on the other hand, disappointing that despite this newer herbal remedies have not emerged in the last decade.

When the new federal regulations come into force, these will be applied throughout the country and the Victorian system of registration will be replaced

by the new system. The new law takes a less rigid approach by allowing herbal remedies to be listed on the basis of quality and safety. The national authorities will no longer look to see if there is at least one known effective substance in the medicine. Evidence for efficacy will not be required provided (a) the herbal medicine is not a poison on the schedule; (b) it is not in the attached schedule shown, and (c) no representation is made in relation to the disorders shown in the schedule put forward. Although the schedule is fairly exhaustive, it will be possible for herbal remedies to be marketed and therapeutic claims made for use of the remedies for conditions not in the schedule. All herbal remedies to be used in Australia are to be registered or listed in the Australia Register of Therapeutic Goods. In this system, herbal remedies could either be registered or listed with the federal drug regulatory agency.

General Review

It appears from the regulatory approach adopted by the six countries that demonstration of efficacy before registration and use of herbal remedies is generally not required. The lack of toxicity is considered more relevant. The only time demonstration of efficacy is required is when a herbal remedy – a new one – is introduced for use in the modern system of medicine. The approach to the assessement of safety of traditional herbal medicines sometimes varies in the different countries. It is not always easy to understand the logic behind the approaches used. A few apparent inconsistencies will be discussed.

The Indian authorities do not need any application for the registration of herbal medicines if these are prepared in exactly the same way as described in the ancient medical texts. The reasoning here is that if a particular medicinal plant preparation has been mentioned or described earlier in a treatise, then that preparation will not be toxic. It is difficult to accept this reasoning. It is possible that one or more of the medicinal plants used originally have now been shown to be toxic. To accept that a plant preparation is harmless just because it has been mentioned in an ancient text is not completely logical. Some assessment should be carried out before the herbal medicine is released and registered, and the release should, in fact, be dependent on the results of the assessment.

The Canadian authorities have less stringent requirements for traditional herbal medicines which would be used to treat minor self-limiting conditions. The reasoning is that a herbal remedy used for treating a minor self-limiting

condition is generally not harmful and therefore safe. The actual toxic effects associated with the use of a particular plant has, in fact, no relationship with the indication of use of that plant. A traditional herbal medicine to be used for treating mild allergy could induce more side-effects than a herbal medicine used for the treatment of cancer.

Many countries with no regulations at the present time are interested in developing such regulations controlling the use of herbal remedies and traditional medicines. These countries range from several countries in Africa and Asia where herbs have been used for generations for therapeutic purposes, to countries in the Gulf where there is increasing use of such substances. People in these countries are importing raw materials, preparing medicines and distributing these medicines, for example, in the Asian population in the Gulf countries. There is also a perception of the potential toxicity of chemical substances in the indigenous Arab population who may be interested in looking at some of the herbal alternatives available for use. Unless, however, some regulations for use of these crude substances and brand name plant medicines are introduced, the situation may well get complicated.

An attempt has been made by the Eastern Mediterranean Regional Office of the World Health Organization to develop a broad document to be used by countries when developing their own regulations. Representatives of nine countries in the Eastern Mediterranean Region of WHO assisted by the WHO Secretariat from Alexandria, drew up, discussed, formulated and adopted in their personal capacity broad guidelines for such regulations at an intercountry meeting held in Kuwait in April 1986.

This document "An Act aimed at ensuring the safety and quality of herbal remedies" (The Herbal Remedies Act) and Notes for Guidance can be obtained from the WHO Eastern Mediterranean Regional Office, Alexandria, Egypt (WHO/EM/Pharm/119-E). It contains an outline of an Act together with explanatory notes on different articles of the Act. In the second part of the document, there are notes for the guidance of persons applying for regulations of herbal remedies. These deal with general guidelines as well as specific guidelines required for the manufacture of finished products of single herbs or a mixture of herbs and herbs used as tablets, powders, liquids, tinctures and extracts. The document deals with quality control requirements: specification of raw materials, pharmacognostic and chromatographic characteristics. The document also describes the pharmacological and toxicological information required and, finally, quality control requirements of the finished product. Finally, there is in the Annex a Model Application Form which can be used for application and regulation of a herbal remedy. This is very useful to

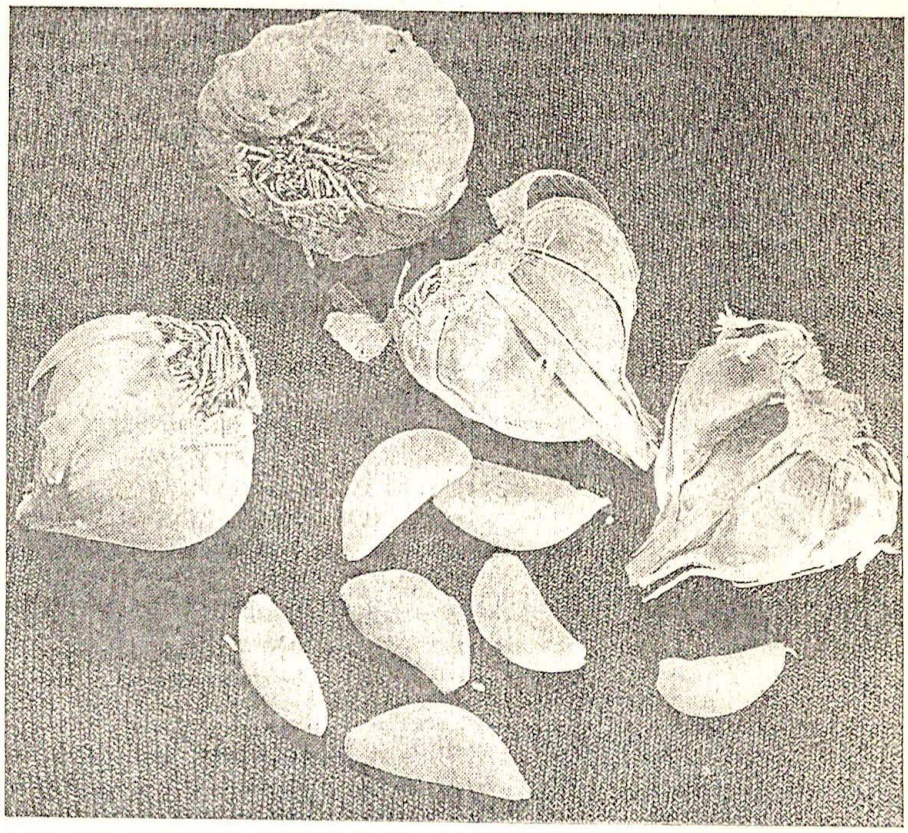
national drug regulatory agencies interested in developing their own regulations for the use of herbal medicines.

The issues which have been discussed earlier in this section about the need for testing medicinal plants already in widespread use and the extent of toxicological and clinical evaluation before general use were also naturally discussed at length. This issue had already been discussed, before the Kuwait meeting, by the author and a few experts at a consultation held in Alexandria and the report printed as an EMRO document WHO-EM/Pharm/105 in 1985. The group prepared a set of "notes to the competent authority on toxicity requirements". These notes, which this author agrees with, are reproduced in the document containing the Act (document WHO-EM/Pharm/119-E), and which, together with the guidelines, are included in this publication with the permission of the Regional Director of the Eastern Mediterranean Regional Office of WHO as Annex.

DRA - 10

The healing powers of garlic

"Garlic then have power to save from death,
Bear with it though it maketh unsavoury breath,
And scorn not garlic like some that think,
It only maketh men wink and drink and stink."



GARLIC undoubtedly makes the breath stink. But as John Harrington, the early 19th century writer, persuasively points out, it is an odour well worth suffering to obtain the benefits of the powerful action of garlic.

So remarkable is its efficacy that Indian mythology has a story about its divine origin. The story goes that when Garuda took away the pot of nectar *amrit*, a few drops fell on earth. Not only did those spots become sacred, but a plant sprung up from all of them, which had all the divine nectarine properties. As it turns out, the plant was called *rasona*, as it had six out of the seven rasas. *Lahsun*, the name by which garlic, *Allium satvium*, is commonly known in India, is a corrupted form of *rasona*.

While laboratories throughout the world are working to unlock the secrets within the simple garlic pod, attempts are being furiously made to dissolve and dispel its 'anti-social' properties (its pungent smell and odour). The garlic has been around as food and medicine earlier than records can prove. Whether by accident or research; instinct or systematic knowledge; folklore or medical fact, the garlic has survived and enjoys a tremendous reputation.

There are innumerable stories about vampires who shied away from garlic, or devils driven insane by the power of garlic, about fevers and colds vanishing with garlic necklaces, about the slaves who built the pyramids subsisting on a high-garlic diet, about garlic eaters who were prevented from entering Greek temples and the Roman Senate, about the aristocracy who stayed away from the "garlic breathers."

Ancient records from China, Egypt, India, Greece, Rome or even the Garden of Eden, provide substantiation of garlic's naturally antibiotic temperament. Historical records show that for over 5000 years garlic's healing powers have been used to treat a wide spectrum of diseases. Though it is not known if garlic was first used as a food or medicine, it is known that in all cultures where the garlic was used, it was a panacea — a cure for all.

Garlic has several uses today as food, beauty aid, curative or preventive medicine. An interesting fact from South India highlights the nature of garlic. In highly orthodox Brahmin households, underground untouchables like onions and garlic were normally taboo, but the rule was reversed during pregnancy. Garlic was then introduced as a compulsory 40-day treatment, extending even to the child, who had to often suffer an overdose of garlic in his food, garlic baths, massages, and infusions. Interestingly, a nutritional analysis of garlic (in terms of Recommended Dietary Allowances) reveals zero value. But medical research and labour is only now beginning to gain on the early herbalists and healers.

One of the popular theories of the late Middle Ages was the 'Doctrine of Signatures'. In effect, the physical characteristics of plants were 'read', examined, and applied to people. Nature was taken as a greenprint for human health.

Food, beauty aid, curative and preventive medicine — the simple garlic pod is all this and more. Scientists the world over are now working to unlock its magical secrets.

Since the garlic plant has a hollow stem, ergo, it would be of benefit in afflictions of the windpipe (respiratory disorders, asthma, bronchial problems, etc). Further, its overall heartlike shape would be good for ailments of the heart.

Though these theories have become a part of herbal history, the principal still remains true that garlic has many uses. It was only during the First World War that extensive scientific research was undertaken to investigate the garlic. This interest probably sprang from the miraculous effect of garlic in case of gangrene, septic poisoning and wound infections of soldiers during the war. The antiseptic properties were traced to sulphur; 33 sulphur compounds were discovered in the garlic pod. The most significant of these are: Allicin (responsible for its antibacterial/anti inflammatory effect), Allin (or "Russian Penicillin" — as garlic is otherwise known — which is what produces its antibiotic activity), Di-Sulphides (a cholesterol lowering effect in the blood vessels and arteries). Garlic has been used for anemia, asthma, regulating sugar, blood clotting, blood pressure, hypertension, chest and heart conditions.

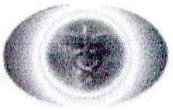
However garlic is best eaten raw. Cooking destroys both the smell and anti-bacterial properties. As an alternative to immediate medication or first aid, garlic is again the better alternative as wounds respond and heal faster.

Garlic is also nature's own natural pesticide and insecticide. A solution of garlic (paste + water) has been found to be an effective pest controller. Garlic can be grown alongside other vegetables/fruits/plants — as it uses very little space, grows quickly and needs little attention.

Garlic is perhaps one of the few herbs that has been used for thousands of years without any toxic after effects. While research as to how it generates its healing magic may continue, the evidence, loud and clear, is that it does cure. ■

VIJAYA VENKAT
Sanctuary Features

DRA 10.



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What is Ginger

Ginger is a strengthening food that has long been used to maintain health. Ginger has a long history of both culinary and medicinal use in Chinese, Japanese and Indian medicines. In ancient China, ginger was regarded as a healing gift from God and was commonly used to cleanse and warm the body.

Qualities of Ginger

The major active ingredients in ginger are terpenes and oleoresin called ginger oil. These two, and other active ingredients in ginger, provide antiseptic, lymph-cleansing, circulation, and constipation relief qualities.

- Ginger is good for the respiratory system
- It is good to fight against colds and flu
- Ginger offers substantial protection from stroke and heart attack because of its ability to prevent blood clotting
- Ginger, a multifaceted herb, is crucial in the battle against cardiovascular disease
- Relieves headaches and pains
- Helps to clear sore throats
- Good for upset stomach and indigestion.
- It is very effective as a cleansing agent through the bowels and kidneys and also through the skin

Some of the problems cured by Ginger

Colds/Flu

Kills influenza virus by improving immune system's ability to fight infections. Ginger also relieves headaches.

from Ms Padmagini Aiyar
Lib - Herbal Remedies file
In
19/8/02

Increases Circulation

Increases the muscular contractions of the heart atria, there by increase in overall circulation. Ginger has been proven to prevent internal blood clots and lowers blood pressure. Ginger Root stimulates the central nervous system controlling the heart and respiratory centers. Ginger helps reduce serum cholesterol, which can slow down circulation.

Ginger Relieves Motion/Morning Sickness

Ginger is one of the most effective herbal remedies to get rid of Motion/ Morning Sickness.

Digestive Aid - Indigestion, Stomach Ache

Ginger Root increases production of saliva in the mouth and dramatically increases digestive enzyme amylase in the saliva to additionally aid digestion. Ginger Root also contains a very effective digestive enzyme zingibain.

Women's Health

Ginger Root is good for the uterus as well as the intestinal tract and may ease menstrual cramps

Skin

Very cleansing - reduces pus in infected wounds as well as boils. Clears spots caused by chicken pox and shingles. Useful for burns, sores, sunburn, ringworm, warts, herpes, athletes foot and even for dandruff.

Stress Protection

Ginger Root appears to limit the effects of adrenergic stimulation and there by relieves the stress

Arthritis

As Ginger root is a proven anti-inflammatory agent, some arthritic victims may find it helpful.

Ginger is sometimes recommended as an alternative to aspirin for people who can not take aspirin because of its irritating effect on the gastrointestinal tract.

Ginger cures following ailments

Asthma - Adults	Athlete's Foot	Acne
Boils/ Blisters	Cold Sores	Cuts
Cold	Flu	Gingivitis
Glandular Fever	Gum Infections	Head Lice
Infections	Insect Bites / Stings	Mosquito Bites
Mouth Ulcers	Mumps	Ringworm (tinea)
Skin Conditions - Antiseptic	Sore Throat	Warts

With all the benefits to the average person, ginger should be included in the diet every

day. Especially for a person who are suffering from heart problems, cold/flu, stress problem, motion sickness a daily dose of ginger combined with other herbs to enhance their effectiveness is part of a sensible, healthy diet.

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DRA-10

ಮನೆ ಔಷಧಗಳು

ಕಾಯಿಲೆ	ಔಷಧಿ
1) ಜ್ವರ	
ಅ) ಹುಟ್ಟಿದ ಮಗುವಿಗೆ ಜ್ವರ ಉಪಯುಕ್ತ	ಅ) ಬಜ, ಅರಿಶಿನಕೊಂಬನ್ನು ಅರೆದು ತಾಯಿಯ ಎದೆಹಾಲಿನಲ್ಲಿ ಕುಡಿಸಬೇಕು.
ಆ) ಒಂದು ವರ್ಷ ಮೇಲ್ಪಟ್ಟ ಮತ್ತು ಎರಡು ವರ್ಷಕ್ಕೆ ಕೆಳ ವಯಸ್ಸಿನ ಮಕ್ಕಳಿಗೆ	ಆ) ಬೇವಿನಚಕ್ಕೆ, ಕಾನಗಚಕ್ಕೆ, ಹುಣಸೆಚಕ್ಕೆಯನ್ನು ಅಂದರೆ ಪ್ರತಿಯೊಂದನ್ನು ಚಿಟಿಕೆ ಪ್ರಮಾಣದಲ್ಲಿ ತೆಗೆದುಕೊಂಡು ತಾಯಿಯ ಎದೆ ಹಾಲಿನಲ್ಲಿ ನೆನೆಸಿ ಕುಡಿಸಬೇಕು.
ಮೇಲಿನ ಮತ್ತು ಚಕ್ಕೆಗಳ ಪ್ರಮಾಣ 1/8 ಭಾಗದಷ್ಟಿರಬೇಕು.	ಇ) ಬೇವಿನಚಕ್ಕೆ, ಕಾನಗಚಕ್ಕೆ, ಹುಣಸೆಚಕ್ಕೆ, ಜೀರಿಗೆ, ಮೆಣಸು, ಬೆಳ್ಳುಳ್ಳಿ ಇವುಗಳನ್ನು ಒಂದು ಟೀ ಚಮಚದ ಪ್ರಮಾಣದಲ್ಲಿ ಒಂದು ಲೋಟ ನೀರಿನಲ್ಲಿ ಹಾಕಿ ಅರ್ಧಲೋಟ ನೀರಾಗುವವರೆಗೂ ಕುದಿಸಿ ಈ ಕಷಾಯವನ್ನು ಕುಡಿಸಬೇಕು.
[illegible] ಪ್ರಮಾಣವು [illegible] [illegible] ಒಂದು [illegible] 1/2 - 1 ಚಮಚ [illegible]	ಈ) ದೊಮ್ಮದಂಡು ಬೇರು, ಇಸರೇರು, ಸಣ್ಣಮಂಬೇರು ತೆಲ್ಲುಪ್ಪು, ನಲ್ಲುಪ್ಪು, ಅಡವಿದಿರಂಪಿ, ಬೆಳ್ಳುಳ್ಳಿ, ಮೆಣಸು ಇವುಗಳನ್ನು ಒಂದು ಚಿಟಿಕೆ ಪ್ರಮಾಣದಲ್ಲಿ ಒಂದು ಲೋಟ ನೀರಿನೊಳಗೆ ಹಾಕಿ ಕುದಿಸಿ ಕಷಾಯ ಮಾಡಿ ಕುಡಿಯಬೇಕು.
2) ವಿಷಮಶೀತಜ್ವರ Harmless.	ಅ) ತುಂಬೆ ಎಲೆ ಒಂದು ಹಿಡಿ, ಮೂರು ಕರಿ ಮೆಣಸನ್ನು ಅರೆದು ದಿನಕ್ಕೆ ಮೂರು ಬಾರಿಯಂತೆ ಮೂರು ದಿನಗಳ ಕಾಲ ಕುಡಿಯಬೇಕು.
3) ಮಲೇರಿಯಾ ಜ್ವರ ತುಳಸಿ ಎಲೆಗಳ ಕಷಾಯ ಕೂಡ ಪ್ರಯೋಜನಕಾರಿ.	ಅ) ಒಂದು ಚಮಚ ಬೇವಿನ ಚಕ್ಕೆ ಪುಡಿಯನ್ನು ಒಂದು ಲೋಟ ನೀರಿನಲ್ಲಿ ಹಾಕಿ ಅರ್ಧ ಲೋಟ ನೀರಾಗುವವರೆಗೂ ಕುದಿಸಿ ನಂತರ ಕುಡಿದರ ಹೆಚ್ಚು ಪ್ರಯೋಜನವಾಗುತ್ತದೆ. ಆ) ಒಂದು ಹಿಡಿ ಉಚ್ಚೆಳ್ಳಿನ ರಸವನ್ನು ತೆಗೆದು ಕುಡಿಯುವುದು. ಇ) ಯೂಪಿಡ್ಲು, ರಾಗಿಡ್ಲು, ಯೂಲಗಿಡ್ಲುವಿನ ಮೂರು ಕಡ್ಡಿಗಳನ್ನು ಒಂದು ಲೋಟ ನೀರಿನಲ್ಲಿ ಹಾಕಿ ಕಾಯಿಸಿ ಅದಕ್ಕೆ ಮೂರು ಪಾಯಿ ಬೆಳ್ಳುಳ್ಳಿ, ಮೂರು ಮೆಣಸಿನಕಾಳನ್ನು ಪುಡಿ ಮಾಡಿ ಹಾಕಿ ಚೆನ್ನಾಗಿ ಕಲಸಿ ಕುಡಿಯಬೇಕು. ಈ) ತೆಳುವಾದ ಬಿಳಿ ಬಟ್ಟೆಯನ್ನು ನೀರಿನಲ್ಲಿ ನೆನೆಸಿ ಹಣೆಯ ಮೇಲೆ ಹಾಕಬೇಕು.

ಖಾಯಿಲೆ	ಚಿಕಿತ್ಸೆ
4) ಕೆಮ್ಮು, ಉಬ್ಬಸ, ಉಸಿರಾಟದ ತೊಂದರೆ	ಆಡುಸೋಗೆ, ವೆಣಸು, ಜೀರಿಗೆ, ಶುಂಠಿಯನ್ನು ನೀರಿನಲ್ಲಿ ಕಷಾಯ ಮಾಡಿ ಕುಡಿಯಬೇಕು.
5) ನೆಗಡಿ, ಅಲರ್ಜಿ (Allergic) ಕೆಮ್ಮು, ಉಬ್ಬಸ, ಉಸಿರಾಟದ ತೊಂದರೆ	ಅರಿಶಿನಕೊಂಬು, ಬೆಳ್ಳುಳ್ಳಿ, ವೆಣಸು, ಜೀರಿಗೆ ಇವುಗಳನ್ನು ಕುಟ್ಟಿ ಒಂದು ಲೋಟ ನೀರಿನಲ್ಲಿ ಬೆರೆಸಿ ಚೆನ್ನಾಗಿ ಕಾಯಿಸಿ ಕುಡಿಯಬೇಕು.
6) ಕೆಮ್ಮು, ನೆಗಡಿ ಅ) ಸಣ್ಣ ಮಕ್ಕಳಿಗೆ ಉಸಿರಾಟದ ತೊಂದರೆ	ಅ) ವಂದೇಲಗ, ವನವಜಗಲು, ಒಳ್ಳೆ ತುಳಸಿ, ನಾಯಿ ತುಳಸಿ ಕೆಂಪಪ್ಪರುಳಿ ಹಾಗು ಚಿಟಿಕೆ ಅರಿಶಿನವನ್ನು ಸವುಪ್ರವಾಣದಲ್ಲಿ ಬೆರೆಸಿ ನೀರಿನಲ್ಲಿ ಕುದಿಸಿ ಕಷಾಯ ಮಾಡಿ ಕುಡಿಸಬೇಕು.
ಆ) ಸಾಮಾನ್ಯ ವಾಗಿ ಎಲ್ಲರಿಗೂ	ಆ) ನೀಲಗಿರಿ ಎಲೆಯನ್ನು ನೀರಿನಲ್ಲಿ ಹಾಕಿ ಕುದಿಸಿ ಆದರ ಹವೆಯನ್ನು ಮೂಗಿನ ಮೂಲಕ ತೆಗೆದರೆ ನೆಗಡಿ, ಕೆಮ್ಮು ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಇ) ಒಂದು ವೆಣಸಿನಕಾಳನ್ನು ಸುಟ್ಟು ಪುಡಿಮಾಡಿ ಪುಡಿಯನ್ನು ಸೊಪ್ಪಿನ ಪಲ್ಯದಲ್ಲಿ ಅಥವಾ ಸಾರಿನಲ್ಲಿ ಬೆರೆಸಿ ಊಟ ಮಾಡಿದರೆ ಕೆಮ್ಮು ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಈ) ಅರಿಶಿನಕೊಂಬನ್ನು ದೀಪದಲ್ಲಿ ಸುಟ್ಟು ಅದರ ಹೊಗೆಯನ್ನು ಸೇವಿಸಿದರೆ ನೆಗಡಿ, ಕೆಮ್ಮು ಕಡಿಮೆಯಾಗುತ್ತದೆ.
7) ಚರ್ಮರೋಗಗಳು: ಅ) ಹುಳಕಡ್ಡಿ	ಅ) ಗಂಧವನ್ನು ಅರೆದು ಇಡಬೇಕು. ಆ) ಕಡ್ಡಿ ಗಿಡದ ಹಾಲನ್ನು ಹಾಕಿ ಅದರ ಮೇಲೆ ಅರಿಶಿನವನ್ನು ಹಾಕಬೇಕು. ಗಿಡದ ವೆಣ್ಣನ್ನಾದರೂ ಹಾಕಬಹುದು.
ಆ) ಹುಣ್ಣುಗಳಿಗೆ	ಅ) ಬೇವಿನಸೊಪ್ಪು, ಅರಿಶಿನ, ಗುಪ್ಪನ್ನು ಅರೆದು ಇಡಬೇಕು. ಆ) ಬೆಳ್ಳುಳ್ಳಿ ರಸವನ್ನು ಹಚ್ಚುತ್ತಿರಬೇಕು.

ಕಾಯಿಲೆ	ಔಷಧಿ
8) ಕಿವಿ ಸೋರುವುದು: ಲವಂಗಗಳಂತೆ ಇಪ್ಪೆಗಳನ್ನು ಎಣ್ಣೆಯಲ್ಲಿ ಕಾಯಿಸಿ ಆ ಎಣ್ಣೆಯನ್ನು ಉಪಯೋಗಿಸುವುದು ಉತ್ತಮ. ನೇರವಾಗಿ [illegible] ಎಣ್ಣೆಯನ್ನು ಬಳಸುವುದು ಅಪಾಯಕಾರಿ [illegible] [illegible] ಎಣ್ಣೆಯನ್ನು [illegible] 2-3 [illegible] ನಂತರ [illegible]	ಅ) ಕೊಪ್ಪರಲೆ, ಚಾಪಕೊಡಪಿಯನ್ನು ಕಾಯಿಸಿ ಅದರ ರಸವನ್ನು ಕಿವಿಯಲ್ಲಿ ಒಂದು ತೊಟ್ಟು ಬಿಡಬೇಕು. ಆ) ಗವೆಯನ್ನು ತೇದು ಹಾಕಬೇಕು. ಇ) ಬೇವಿನೆಲೆ, ಅರಿಶಿನ, ಚಿಟಿಕೆಉಪ್ಪನ್ನು ಅರೆದು ರಸ ತೆಗೆದುಕೊಂಡು, ಆ ರಸವನ್ನು ಶೋಧಿಸಿ ಕಿವಿಯಲ್ಲಿ ಬಟ್ಟು ಹತ್ತಿ ಇಡಬೇಕು. ಈ) ಹಾಲು ತಂದು ಅದರಲ್ಲಿ ರಾತ್ರಿ ತಾವುರವನ್ನು ನೆನೆಯಿಸಿ ಅದರ ಹಾಲನ್ನು ಬೆಳಗ್ಗೆ ಎದ್ದು ಕಿವಿಗೆ ಹಾಕಿ ಹತ್ತಿಯನ್ನು ಇಡಬೇಕು.
9) ವಾಂತಿ ನವಿಲುಗರಿಯನ್ನು ಸುಟ್ಟು ಬಸ್ಮ ಮಾಡಿ ಉಪಯೋಗಿಸುವುದು ಹೆಚ್ಚು ಪ್ರಯೋಜನಕಾರಿ.	ಅ) ಪಾಕಪಟ್ಟೆ, ಜೇನುತುಪ್ಪ, ನವಿಲುಗರಿಯನ್ನು ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಪಾಕಪಟ್ಟೆ ಮತ್ತು ನವಿಲುಗರಿಯನ್ನು ಬಿಸಿಯಲ್ಲಿ ಕಾಯಿಸಿ ಜೇನುತುಪ್ಪದೊಡನೆ ಬೆರೆಸಿ ನೆಕ್ಕಿಸಬೇಕು.
ಅ) ಪಿತ್ತದ ವಾಂತಿ ಅಪಾಯಕಾರಿಯೇನಲ್ಲ.	ಆ) ಹುಣಸೆಹಣ್ಣು, ಜೀರಿಗೆಯನ್ನು ಅರೆದು ದವಡೆಯಲ್ಲಿ ಇಟ್ಟುಕೊಂಡು ಅದರ ರಸವನ್ನು ನುಂಗುತ್ತಿರಬೇಕು.
10) ಭೇದಿ ಅ) ಸಣ್ಣ ಮಕ್ಕಳಿಗೆ. ಉತ್ತಮ	ಅ) ಹಸಿಗನಗನೆ, ಪಾಕಪಟ್ಟೆಯನ್ನು ತಾಯಿ ಹಾಲಿನ ಜೊತೆಗೆ ಅರೆದು ಕುಡಿಸಬೇಕು. ಪನ್ನೀರು ಎಲೆಯ ರಸವನ್ನು ಮಗುವಿನ ತಲೆಯ ಮೇಲೆ ಹಾಕಬೇಕು.
ಈ ಪ್ರಕ್ರಿಯನ್ನು ಸಾಮಾನ್ಯರಿಗೂ ಉತ್ತಮ	ಆ) ಒಂದು ಲೋಟ ನೀರಿಗೆ ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪು ಒಂದು ಚಮಚ ಸಕ್ಕರೆಯನ್ನು ಹಾಕಿ ಚೆನ್ನಾಗಿ ಕಲಸಿ ಮಕ್ಕಳಿಗೆ ಕುಡಿಸುತ್ತಿರಬೇಕು.
ಆ) ಸಾಮಾನ್ಯವಾಗಿ ಎಲ್ಲರಿಗೂ ಉತ್ತಮ	ಇ) ಭೇದಿ ಬಿದ್ದರೆ ಹರಳೆಣ್ಣೆ ಇಟ್ಟು ತೀಡಬೇಕು ಈ) ದಾಳಿಂಬೆ ಸಿಪ್ಪೆಯನ್ನು ಅರೆದು ಕುಡಿಯಬೇಕು. ಉ) ಸ್ವಲ್ಪ ಸ್ವಲ್ಪವಾಗಿ ಹಸಿಬಾಳೆಹಣ್ಣನ್ನು ತಿನ್ನುತ್ತಿರಬೇಕು.

ಖಾಯಿಲೆ	ಔಷಧಿ
11) ಹೊಟ್ಟೆನೋವು	ಅ) ಬೆಳುಳ್ಳಿ ಒಂದು ಪಾಯಿ, ಮುಷ್ಟಾರು ಮೆಣಸು, ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪನ್ನು ಬಾಯಿಗೆ ಹಾಕಿಕೊಂಡು ಒಂದು ಲೋಟ ಬಿಸಿ ನೀರನ್ನು ಕುಡಿಯಬೇಕು.
	ಆ) ಒಂದು ಲೋಟ ನಿಂಬೆಹಣ್ಣಿನ ರಸಕ್ಕೆ ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪು, (ನೊಣಡಾವನ್ನು) ನೀರಿಸಿ ಕರಿಸಿ ಕುಡಿಯಬೇಕು.
	ಇ) ಬೆಳುಳ್ಳಿ, ಶುಂಠಿ, ಮೆಣಸು, ಜೀರಿಗೆ, ಉಪ್ಪು ಇವುಗಳನ್ನು ಒಂದು ಟೀ ಪವುಚದಷ್ಟು ನುಣ್ಣಗೆ ಅರೆದು ಕಷಾಯ ಮಾಡಿ ಕುಡಿಯಬೇಕು.
ಅ) ಬಸುರಿ ಹೆಂಗಸರಿಗೆ ಹೊಟ್ಟೆನೋವು	ಅ) ಜೀರಿಗೆ ಕಷಾಯವನ್ನು ಮಾಡಿ ಕುಡಿಯಬೇಕು
ಆ) ಅಜೀರ್ಣದ ಹೊಟ್ಟೆನೋವು	ಆ) 'ಓವನ್ನು ಮಜ್ಜಿಗೆಯಲ್ಲಿ ಹಾಕಿ ಕುಡಿಯಬೇಕು
	ಇ) ಶುಂಠಿ, ಬೆಲ್ಲ ತಿಂದರೆ ಹೊಟ್ಟೆನೋವು ಮಾಸಿಹೋಗುತ್ತದೆ.
	ಈ) ಕರಿಬೇವಿನ ನೊಪ್ಪನ್ನು ಮಜ್ಜಿಗೆಯಲ್ಲಿ ಹಾಕಿ ಶುಂಠಿ, ಉಪ್ಪನ್ನು ನೀರಿಸಿ ಕುಡಿದರೆ ಭೇದಿ ಹೊಟ್ಟೆನೋವು ಮಾಸಿಹೋಗುತ್ತದೆ.
ಇ) ಸಣ್ಣ ಮಕ್ಕಳಿಗೆ ಹೊಟ್ಟೆನೋವು	ಉ) ಹರಳೆಣ್ಣೆಯಂತನನ್ನು ಹೊಕ್ಕಳಿಗೆ ಹಚ್ಚಿ ಬೆಳ್ಳೇದಿಲಿಯಂತನನ್ನು ದೀಪದಲ್ಲಿ ಕಾಯಿಸಿ ಬೆಚ್ಚಗಾದ ಆ ಎಲೆಯಂತನನ್ನು ಹೊಕ್ಕಳಿನ ಮೇಲೆ ಹಾಕಬೇಕು.
12) ತಲೆನೋವು	ಅ) ಬೆಳಗ್ಗೆ ತಲೆನೋವು ಇರುವವರು ರಾತ್ರಿ ಹೊತ್ತು ಬೆಳುಳ್ಳಿಯಂತನನ್ನು ಅಗೆದು ತಿನ್ನಬೇಕು.
	ಆ) ಎರಡೂಮೂರುಬಟ್ಟಲುಗಳ ಕೊಳೆಯಂತರಿಗೆ ಒತ್ತಿ ಹಿಡಿದು ಕೊಂಡರೆ(ನರಗಳನ್ನು) ತಲೆನೋವು ಮಾಸಿ ಆಗುತ್ತದೆ.
	ಇ) ತಣ್ಣೀರಿನ ಬಟ್ಟೆಯಂತನನ್ನು ಹಣೆಯಂತ ಮೇಲೆ ಹಾಕಬೇಕು.
	ಈ) ಮೆಂತ್ಯ, ಅರಿಶಿನವನ್ನು ಅರೆದು ಹಣೆಗೆ ಹಚ್ಚಿ ಶಾಖ ಕೊಟ್ಟರೆ ತಲೆನೋವು ಮಾಸಿಹೋಗುತ್ತದೆ.
	ಉ) 5–6–7 ಎಲೆಗಳನ್ನು(ನೀಲಗಿರಿ) ನೀರಿನಲ್ಲಿ ಕುದಿಸಿ ಹವೆಯಂತನನ್ನು ತೆಗೆದುಕೊಂಡಾಗ ತಲೆನೋವು, ನೆಗಡಿ ಮಾಸಿಹೋಗುತ್ತದೆ.

ಪುಟದ ಸಂಖ್ಯೆ	ವಿಷಯ
1–2	ತುಂಬಿ
3–4	ಬೇವು
5	
5–6	ತುಳಸಿ
7–8	ಆಡುಸೊಗೆ
9	ಶ್ರೀಗಂಧ
10	ದಾಳಿಂಬಿ
11	ಎಕ್ಕ
12	ಉತ್ತರಾಣಿ
13	ಬಾಳೆ
14	ಹಾಗಲಕಾಯಿ
15	ಕಳ್ಳಿ(ಕಾಡಿ)
16	ಪವಾಂಯ
17	ಮುಟ್ಟಿದರೆ ಮುನಿ(ನಾಚಿಕೆ ಮುಳ್ಳು)
18	ಹರಳು
19	ಪಗಟಿ
20	ಗಜರಿ ಗಿಡ(ಉಳದ ಗಿಡ) ಅಥವಾ ಆಕಾಸಿಂಯ
21	ಕುಪ್ಪಿಗಿಡ
22	ಬಜೆ
23	ಮಾವು
24	ನೆರ್ಲಕಾಯಿ
25	ಸೀಬಿ
26	ನುಗ್ಗೆ
27	ನೆಲ ನಲುರ್ಲಿ (ಕೀಳಾನರ್ಲಿ)
28 –30	ರೋಗಲಕ್ಷಣಗಳು
31	ದತೂರಿ
32	ಹೇರಳೆಕಾಯಿ
33	ಬೆಕ್ಕಿನ ಮುಟ್ಟು
34	ವೀಳೆಯದೆಲೆ
35	ಬಿಳಿ ದಾಸವಾಳ
36	ರೋಳೆ ಸರ
37	ನಿತ್ಯಕಪುಷ್ಪ
38	ನಾಗದಾಳೆ(ಹಾವು ನಂಜಿನ ಸೊಪ್ಪು)
39	ಗಾಳಿಸೊಪ್ಪು
40	ನಂದಿ ಬಟ್ಟಲು
41	ಹಪ್ಪಿಗಿಡ
42	ದೊಡ್ಡಪತ್ರೆ
43	ರೋಗಲಕ್ಷಣಗಳು

ತುಂಬೆ

ನೆಗಡಿ-ಜ್ವರ:ಚಿಕಿತ್ಸೆ: ಎರಡು ಟೀ ಚಮಚ ತುಂಬೆ ನೆಲಾಪ್ಪಿನ ರಸದ ಜೊತೆಗೆ ಮುಚ್ಚಾರು ಕರಿ ಮೆಣಸಿನ ಕಾಳನ್ನು ಪುಡಿ ಮಾಡಿ ಬೆರೆಸಿ ದಿನಕ್ಕೆ ಮುಚ್ಚಾರು ಸಲ (ಬೆಳಿಗ್ಗೆ, ಮಧ್ಯಾಹ್ನ, ಸಾಂಯಂಕಾಲ) ತೆಗೆದುಕೊಂಡರೆ ನೆಗಡಿ-ಜ್ವರ ಮಾಸಿಂಯಾಗುತ್ತದೆ. ಕಾಯಿಲೆ ಮಾಸಿಂಯಾಗುವ ತನಕ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕಾಗುತ್ತದೆ.

ವಿಷಮ ಶೀತ ಜ್ವರ(ಟೈಫಾಯಿಡ್): ಎರಡು ಟೀ ಚಮಚ ತುಂಬೆ ನೆಲಾಪ್ಪಿನ ರಸದ ಜೊತೆಗೆ ಮುಚ್ಚಾರು ಕರಿ ಮೆಣಸಿನ ಕಾಳನ್ನು ಪುಡಿ ಮಾಡಿ ಬೆರೆಸಿ ದಿನಕ್ಕೆ ಮುಚ್ಚಾರು ಸಲ (ಬೆಳಿಗ್ಗೆ, ಮಧ್ಯಾಹ್ನ, ಸಾಂಯಂಕಾಲ) ತೆಗೆದುಕೊಂಡರೆ ವಿಷಮ ಶೀತ ಜ್ವರ ಮಾಸಿಂಯಾಗುತ್ತದೆ. ಕಾಯಿಲೆ ಮಾಸಿಂಯಾಗುವವರೆಗೆ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕಾಗುತ್ತದೆ.

ಈ ಕಾಯಿಲೆ ಇರುವಾಗ ಹಿಡಿಯ ದ್ರವ ಆಹಾರ ಮತ್ತು ಸುಲಭವಾಗಿ ಜೀರ್ಣವಾಗುವ (ರವೆ ಗಂಜಿ, ಹಣ್ಣುಗಳು, ಇತ್ಯಾದಿ) ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಶೀತ ಪದಾರ್ಥಗಳಿಂದ ದೂರ ಇರುವುದು ಒಳ್ಳೆಯಂತದು (ಬಾಳೆಹಣ್ಣು, ಹಲಸಿನಕಾಯಿ, ಬದನೆ, ಕುಂಬಳ ಇತ್ಯಾದಿ)

ಮುಖವಾಕೃತಿ: ಒಂದು ಟೀ ಚಮಚ ತುಂಬೆ ರಸವನ್ನು ಅಷ್ಟೇ ಅಳತೆಯಂತೆ ಸುಣ್ಣದ ತಿಳಿನೀರಿನೊಡನೆ ಬೆರೆಸಿ ದಿನಕ್ಕೆ ಎರಡು ಸಲ (ಬೆಳಿಗ್ಗೆ, ಸಾಂಯಂಕಾಲ) ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಹೀಗೆ ಮುಚ್ಚಾರು ವಾರಗಳ ಕಾಲ ಮಾಡಿದರೆ ಮೊಳಕೆ ನಿಂತು ಹೋಗುತ್ತದೆ.

ಚಿಕಿತ್ಸೆ ತೆಗೆದುಕೊಳ್ಳುತ್ತಿರುವ ದಿನಗಳಲ್ಲಿ ಹೆಚ್ಚಾಗಿ ರಾಗಿ ಗಂಜಿ, ಮೊಸರು, ಮುಚ್ಚಾಲಂಗಿ ನೆಲಾಪ್ಪು, ಬಸಳೆ ನೆಲಾಸ್ಪು ತಿನ್ನುವುದು ಒಳ್ಳೆಯಂತದು. ಕಾಫಿ ಇತ್ಯಾದಿ ಕುಡಿಯಂತಿಲ್ಲ.

ಆರಿಸಿನ ಕಾಮಾಲೆ: ಒಂದು ಟೀ ಚಮಚ ತುಂಬೆ ರಸಕ್ಕೆ ಎರಡು ಟೀ ಚಮಚ ಜೇನುತುಪ್ಪ ಬೆರೆಸಿ ದಿನಕ್ಕೆ ಎರಡು ಬಾರಿ ತೆಗೆದುಕೊಳ್ಳಬೇಕು (ಬೆಳಿಗ್ಗೆ ಸಂಜೆ) ಕಾಯಿಲೆ ಇರುವವರೆಗೂ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕಾಗುತ್ತದೆ.

ಈ ಕಾಯಿಲೆ ಇರುವವರು ಜಿಡ್ಡಿನ ಪದಾರ್ಥಗಳನ್ನು ಸಂಪೂರ್ಣ ನಿಲ್ಲಿಸಿ ಬಿಡಬೇಕು.

ಸಿಹಿಮೂತ್ರರೋಗ: ಒಂದು ಹಿಡಿ ತುಂಬಿ ನೆಲಾಪ್ಪನೆಯಾಂದಿಗೆ ನಾಲ್ಕು-ಐದು ಕರಿ ಬೇವಿನಸಿನ ಕಾಳನ್ನು ಕಷಾಯಿಸಿ ನುಣ್ಣಗೆ ಅರೆದು ಪ್ರತಿ ದಿನ ಬೆಳಿಗ್ಗೆ ತೆಗೆದುಕೊಳ್ಳುವುದರಿಂದ ಸಿಹಿಮೂತ್ರ ರೋಗ ವಾಸಿಯಾಗುತ್ತದೆ. ಇದನ್ನು 'ವಳ ಎಂಬು ವಾರಗಳ ಕಾಲ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಕೆಲವರಲ್ಲಿ ಈ ಔಷಧಿಯಿಂದ ಭೇದಿಯಾಗುವ ಸಂಭವವಿದೆ.

ಈ ಕಾಯಿಲೆ ಇರುವವರು ಸಿಹಿ ಪದಾರ್ಥಗಳನ್ನು ಸೇವಿಸಲೇಬಾರದು. ಅನ್ನವನ್ನು ಕಡಿವೆ ಮಾಡಿ ಗೋಧಿ, ರಾಗಿ, ಜೋಳಗಳನ್ನು ಉಪಯೋಗಿಸಿದರೆ ಉತ್ತಮ.

ಕಜ್ಜಿ, ಇಸಬು, ನವೆ, ತುರಿ ಇತ್ಯಾದಿ: ಒಂದು ಹಿಡಿ ತುಂಬಿ ನೆಲಾಪ್ಪನನ್ನು ಜೆನ್ನಾಗಿ ತೊಳೆದು ಒರೆಸಿ ಒಂದು ತುಂಡು ಅರಿಶಿನ ಕೊಂಬಿನೆಯಾಂದಿಗೆ ಒಂದು ಬಿಟಿಕೆ ಉಪ್ಪು ಬೆರೆಸಿ ಯಾವುದಾದರೂ ಎರಡು ತೊಟ್ಟು ಎಳ್ಳೆಣ್ಣೆ (ಸೀವೆ ಎಣ್ಣೆ ಬಿಟ್ಟು) ಹಾಕಿ ಜೆನ್ನಾಗಿ ಅರೆದು ಕಜ್ಜಿ ಇತ್ಯಾದಿ ಇರುವ ಜಾಗಕ್ಕೆ ಜೆನ್ನಾಗಿ ಉಜ್ಜಿ ಹಚ್ಚಬೇಕು. ಹೀಗೆ ಹಚ್ಚಿ ಬೆಳಗಿನ ಎಳೆ ಬಿಸಿಲಿನಲ್ಲಿ 15 ನಿಮಿಷಗಳ ಕಾಲ ಬಿಡಬೇಕು. ಆ ನಂತರ ಬಿಸಿ ನೀರಿನಲ್ಲಿ ಸೀಗೆ ಪುಡಿಯಿಂದ ಸ್ನಾನ ಮಾಡಿಸಬೇಕು. ಕಾಯಿಲೆವಾಸಿಯಾಗುವವರೆಗೆ ಇದನ್ನು ಮಾಡಬೇಕು.

ಕಜ್ಜಿ ಒಂದು ಅಂಟುರೋಗ. ಆದಂರಿಂದ ಹಾಕಿದ ಬಟ್ಟೆಯಂತನ್ನು ಬಿಸಿ ನೀರಿನಲ್ಲಿ ಜೆನ್ನಾಗಿ ಕುದಿಸಿ ಉಪಯೋಗಿಸಬೇಕು.

ತಲೆನೋವು: ಒಂದು ಹಿಡಿ ತುಂಬಿ ನೆಲಾಪ್ಪನ್ನು ತೊಳೆದು ನುಣ್ಣಗೆ ಅರೆದು ಬಿಸಿ ಮಾಡಿ ಹಣೆಗೆ ಹಚ್ಚುವುದರಿಂದ ಇದು ವಾಸಿಯಾಗುತ್ತದೆ.

ಅರ್ಧ ತಲೆ ನೋವು: ಒಂದು ಬೀಜವಿಲ್ಲದ ತುಂಬಿ ರಸಕ್ಕೆ ಒಂದು ಬೆಳ್ಳುಳ್ಳಿಯಂತನ್ನು ಜಜ್ಜಿ ಅದರ ರಸ ಹಿಂಡಿ, ಎಡ ಬದಿ ತಲೆನೋವಿದ್ದರೆ ಬಲ ಹೆದಿಂತು ಮುಂಗಿಗೂ ಬಿಡಬೇಕು. ಹೀಗೆ ಮಾಡುವಾಗ ಗಂಟಲಲ್ಲಿ ಉರಿ ಬರುತ್ತದೆ. ಗಾಬರಿಯಾಗುವ ಅವಶ್ಯಕತೆಯಿಲ್ಲ. ಕೆಲವು ಬಿಂಗು ಉಪಯೋಗಿಸಿದರೆ ಉರಿ ಬರುವುದಿಲ್ಲ.

ಕಣ್ಣಿನಲ್ಲಿ ಹುಳ: ಒಂದು ಬೀಜವಿಲ್ಲದ ತುಂಬಿ ರಸಕ್ಕೆ ಅಷ್ಟೇ ಅಳತೆ ಜೇನು ತುಪ್ಪ ಬೆರೆಸಿ ದಿನಕ್ಕೆ ಎರಡು ಸಲ, ಹದಿನೈದು ದಿನ ಹುಳವಿರುವ ಜಾಗಕ್ಕೆ ಹಚ್ಚುತ್ತಾ ಬಂದರೆ ಗುಣ ಕಂಡು ಬರುತ್ತದೆ.

ಆದರೆ ಯಂತುಸ್ಸಾಗಿ ಕಣ್ಣಿನಲ್ಲಿ ಹುಳ ಬಂದದ್ದೇ ಆದರೆ ಇದು ಉಪಯೋಗವಾಗುವುದಿಲ್ಲ. ಬಿಕ್ಕೆ ಯಂತುಸ್ಸಿನವರಲ್ಲಿ ಕಣ್ಣಿಗೆ 'ಏನಾದರೂ ತಗುಲಿರಬೇಕೋ ಅಥವ 'ಏನಾದರೂ ಕಾಯಿಲೆ ಬಂದು ಹುಳ ಬಂದಿದ್ದರೆ ಈ ಚಿಕಿತ್ಸೆ ಉಪಯೋಗಕ್ಕೆ ಬರುತ್ತದೆ.

ಬೇವು

ಕಜ್ಜಿ ಚಿಕಿತ್ಸೆ: ಒಂದು ಹಿಡಿ ಬೇವಿನ ಎಲೆ, ಒಂದು ಅರಿಶಿನ ಕೊಂಬಿನ ತುಂಡು, ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪು ಇವುಗಳನ್ನು ಚೆನ್ನಾಗಿ ಅರೆಯಬೇಕು. ಕಜ್ಜಿಯ ಮೇಲೆ ಇದನ್ನು ಉಜ್ಜಿ ಹಚ್ಚಬೇಕು. ನಂತರ ಬೆಳಗಿನ ಎಳೆ ಬಿಸಿಲಿಗೆ ಹತ್ತು ನಿಮಿಷ ಬಿಟ್ಟು ಸೀಗೇಪುಡಿಯಿಂದ ಚೆನ್ನಾಗಿ ಉಜ್ಜಿ ಸ್ನಾನ ಮಾಡಬೇಕು. ಹೀಗೆ ನಾಲ್ಕು ದಿನ ಮಾಡಬೇಕು.

ಕಜ್ಜಿ ಅಂಟುರೋಗವಾದ್ದರಿಂದ ಹಾಕಿದ ಬಟ್ಟೆಯನ್ನು ಬಿಸಿನೀರಿನಲ್ಲಿ ಚೆನ್ನಾಗಿ ಕುದಿಸಬೇಕು.

ದಡಾರ: ದಡಾರದ ಗುಳ್ಳೆಗಳು ಹಣ್ಣಾಗುವ ಸಮಯದಲ್ಲಿ, ಒಂದು ಹಿಡಿ ಬೇವಿನ ಸೊಪ್ಪಿಗೆ ಒಂದು ತುಂಡು ಅರಿಶಿನ ಕೊಂಬು, ಒಂದು ಚಮಚ ಕರಿಜೀರಿಗೆ ಹಾಕಿ ಚೆನ್ನಾಗಿ ಅರೆದು ನಯವಾಗಿ ಉಜ್ಜಿ ಹಚ್ಚಬೇಕು. ಹೀಗೆ ಮೂರು ದಿನ ಹಚ್ಚುತ್ತಾ ಬಂದು ನಾಲ್ಕನೇ ದಿನ ಸೊಪ್ಪಿನ ಕಷಾಯದಲ್ಲಿ ಸ್ನಾನ ಮಾಡಿಸಬೇಕು. ಕಷಾಯವನ್ನು ಹೊಟ್ಟೆಗೂ ಕೊಡಬಹುದು.

ಈ ಸಮಯದಲ್ಲಿ ಕಣ್ಣಿಗೆ ಕೊತ್ತಂಬರಿ ಬೀಜವನ್ನು ನೆನೆಸಿದ ನೀರನ್ನು ಆಗಾಗ ಹಾಕುತ್ತಿರಬೇಕು.

ಜ್ವರ: ಸಾಮಾನ್ಯ ಜ್ವರಕ್ಕೆ ಬೇವಿನ ಸೊಪ್ಪಿನ ಕಷಾಯದಲ್ಲಿ ಸ್ನಾನ ಮಾಡುವುದು ಒಳ್ಳೆಯದು. ಬೇವಿನ ಸೊಪ್ಪನ್ನು ಕುದಿಸಿ, ಕುದಿಯುತ್ತಿರುವ ನೀರಿನ ಆವಿಯನ್ನು ಹೀರಿಕೊಳ್ಳಬೇಕು. ಹೀರಿಕೊಳ್ಳುವಾಗ ಪಾತ್ರೆ ಮತ್ತು ತಲೆಯನ್ನು ಒಂದೇ ಬಟ್ಟೆಯಿಂದ ಕವಿಚಿ ಮುಚ್ಚುವುದರಿಂದ ಆವಿ ವ್ಯರ್ಥವಾಗಿ ಹೋಗುವುದಿಲ್ಲ.

ಹುಳಕಡ್ಡಿ: ಒಂದು ಹಳಕು ಬೆಳ್ಳುಳ್ಳಿಯನ್ನು ಬೇವಿನ ರಸದಲ್ಲಿ ಜಜ್ಜಿ ದಿನಕ್ಕೆ ಮೂರು ಬಾರಿ ಹಚ್ಚುತ್ತಾ ಬಂದರೆ ಹುಳಕಡ್ಡಿ ಮಾಯವಾಗುತ್ತದೆ. ಉಜ್ಜುವಾಗ ಸಗಣಿ ನೆಲದಲ್ಲಿ ಉಜ್ಜುವುದು ಒಳ್ಳೆಯದು.

ಸಂದುನೋವು: ಬೇವಿನ ಸೊಪ್ಪು, ನಕ್ಕಿ(ಲಕ್ಕಿ) ಸೊಪ್ಪು, ನಿಂಬೆ ಸೊಪ್ಪುಗಳನ್ನು ಹಾಕಿ ಚೆನ್ನಾಗಿ ಕುದಿಸಿ, ಬೇಕಾದ ಹದಕ್ಕೆ ಆರಿಸಿ (ತಣ್ಣೀರು ಬೆರೆಸಬಾರದು) ನೋವಿರುವ ಸಂದುಗಳಿಗೆ ಚೆನ್ನಾಗಿ ಸುರಿದುಕೊಳ್ಳಬೇಕು. ಹೀಗೆ ಮಾಡುತ್ತಾ ಬಂದರೆ ಸಂದುನೋವು ವಾಸಿಯಾಗುತ್ತದೆ.

ಹಲ್ಲುತೊಂದರೆ: ಹಲ್ಲಿನ ಯಾವುದೇ ತೊಂದರೆಗೆ ಬೇವಿನ ಕಡ್ಡಿಯನ್ನು ಜಡಿದು ದಿನಾ ಬೆಳಿಗ್ಗೆ ದಿನಾಲ್ಗಿ ಹಲ್ಲುಜ್ಜುವುದರಿಂದ ಸಮಾಧಾನವಾಗುತ್ತದೆ.

ಹೊಟ್ಟೆಹುಳ: ಒಂದು ಹಿಡಿ ಬೇವಿನ ನೊಪ್ಪಿನ ರಸ ತೆಗೆದು ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪು ಹಾಕಿ ಖಾಲಿ ಹೊಟ್ಟೆಗೆ ಕೊಡುವುದರಿಂದ ಮಕ್ಕಳಲ್ಲಿ ಹೊಟ್ಟೆ ಹುಳುಗಳ ನಿವಾರಣೆಯಾಗುತ್ತದೆ.

ತುಳಸಿ

ಅರಿಶಿನ ಕಾವಾಲಿ: ಚಿಕಿತ್ಸೆ: ನಾಲ್ಕು ಟೀ ಚಮಚದಷ್ಟು ತುಳಸಿ ರಸವನ್ನು ಪ್ರತಿ ದಿನ ಬೆಳಿಗ್ಗೆ ಸೇವಿಸುತ್ತಾ ಹೋದರೆ ಅರಿಶಿನ ಕಾವಾಲಿ ಗುಣವಾಗುತ್ತದೆ. ಕಾಂತಿರಿ ವಾಸಿಂತಾಗುವವರೆಗೂ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕು.

ಕಣ್ಣಿನ ದೋಷಗಳು: ಒಂದೆರಡು ತೊಟ್ಟು ರಸವನ್ನು ಅಷ್ಟೇ ಅಳತೆಯ ತುಪ್ಪದಲ್ಲಿ ಬೆರೆಸಿ ದಿನಾ ಹಚ್ಚುತ್ತಿದ್ದರೆ ಕಣ್ಣುನೋವು, ಕಣ್ಣಿನಲ್ಲಿ ನೀರು ಸುರಿಂತಾಗುವುದು, ಕಣ್ಣು ಉರಿ, ಕಣ್ಣಿನಲ್ಲಿ ಗುಳ್ಳಂತಾಗುವುದು, ಕೆಂಗಣ್ಣು ಇತ್ಯಾದಿಗಳು ನಿವಾರಣೆ ಆಗುತ್ತದೆ.

ರಾತ್ರಿ ಕುರುಡು: ಕೃಷ್ಣ (ಕರಿ) ತುಳಸಿಂತು ಒಂದೆರಡು ತೊಟ್ಟು ರಸವನ್ನು ದಿನಾ ಕಣ್ಣಿಗೆ ಬಿಡುತ್ತಾ ಬಂದರೆ ರಾತ್ರಿ ಕುರುಡು ಪರಿಹಾರ ಕಾಣುವುದು.

ಹಲ್ಲು ನೋವು, ವಸಡು ನೋವು: ಒಂದು ಚಮಚ ತುಳಸಿ ರಸದೊಂದಿಗೆ ನಾಲ್ಕು ಕರಿಮೆಣಸಿನ ಕಾಳು ಸೇರಿಸಿ ನುಣ್ಣಗೆ ಅರೆದು ಹಲ್ಲು ಮತ್ತು ವಸಡಿಗೆ ಹಚ್ಚುವುದರಿಂದ ಹಲ್ಲುನೋವು, ವಸಡುನೋವು ಮತ್ತು ವಸಡಿನಲ್ಲಿ ರಕ್ತ ಬರುವುದು ಕೂಡ ನಿಲ್ಲುತ್ತದೆ. ದಿನಕೊಮ್ಮೆ ಕಾಂತಿರಿ ವಾಸಿಂತಾಗುವವರೆಗೂ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕು.

ಕಜ್ಜಿ: ಒಂದೊಂದು ಚಮಚ ತುಳಸಿ ರಸ, ನಿಂಬೆರಸ ಮತ್ತು ಈರುಳ್ಳಿ ರಸವನ್ನು ವಿಶ್ರಣ ಮಾಡಿ ದಿನಾ ಹಚ್ಚುತ್ತಾ ಬಂದರೆ ಕಜ್ಜಿ ಗುಣವಾಗುತ್ತದೆ.

ಅಜೀರ್ಣ: ಒಂದು ಚಮಚ ಜೇನು ತುಪ್ಪದೊಂದಿಗೆ ಅಷ್ಟೇ ಪ್ರಮಾಣ ತುಳಸಿ ರಸ ಸೇರಿಸಿ ಕುಡಿಂತಾಗುವುದರಿಂದ ಅಜೀರ್ಣ ನಿವಾರಣೆಂತಾಗುತ್ತದೆ.

ಬಾಂತಿ ಬೇಧಿ: 'ಎಳ-ಎಂಟು ತುಳಸಿ ಎಲೆಗಳನ್ನು ದಿನಕ್ಕೆ ಮೂರು ಬಾರಿ ಅಗಿದು ತಿನ್ನುತ್ತಿದ್ದರೆ ಬಾಂತಿಬೇಧಿ ನಿವಾರಣೆಂತಾಗುತ್ತದೆ. ?

ಕಫ: ತುಳಸಿ ರಸವನ್ನು ಆಗಾಗ ಜಿಗಿಂತಾಗುವುದರಿಂದ ಜೀರಾಲ್ಲು ಸುರಿಂತಾಗುವುದು ಮತ್ತು ಕಫ ಕಟ್ಟುವುದು ನಿವಾರಣೆಂತಾಗುತ್ತದೆ.

ಕೆಮ್ಮು, ಗಂಟಲು ಕೆರೆತ: ಒಂದು ಹಿಡಿ ತುಳಸಿ ಎಲೆಂತಾನನ್ನು ಗೋರಿ ಗಾತ್ರದಷ್ಟು ಹಸಿ ಶುಂಠಿಂತಾಂದಿಗೆ ಅರೆದು ಒಂದು ಚಮಚ ಜೇನು ಸೇರಿಸಿ ದಿನಕ್ಕೆ ಎರಡು ಬಾರಿ ಸೇವಿಸುತ್ತಿದ್ದರೆ ಗಂಟಲು ಕೆರೆತ, ಕೆಮ್ಮು ಗುಣವಾಗುತ್ತದೆ.

ತಲೆನೋವು : ತುಳಸಿ ರಸದಲ್ಲಿ ಏಲಕ್ಕಿ ಬೀಜಗಳನ್ನು ಅರೆದು ಹಣೆಗೆ ಹಚ್ಚುವುದರಿಂದ ತಲೆನೋವು ಗುಣವಾಗುತ್ತದೆ.

ಮೊಡವೆ, ಕಲೆಗಳು: ಒಣಗಿದ ತುಳಸಿ ಎಲೆಗಳನ್ನು ನೀರಿನಲ್ಲಿ ಅರೆದು ಮುಖಕ್ಕೆ ಹಚ್ಚುತ್ತಿದ್ದರೆ ಮೊಡವೆ ಕಲೆಗಳು ನಾಶವಾಗುತ್ತದೆ.

ಹುಳಕಡಿ: ಒಂದು ಚಮಚ ತುಳಸಿ ರಸದಲ್ಲಿ ಬೆಳ್ಳುಳ್ಳಿ ರಸವನ್ನು ಸೇರಿಸಿ ಹುಳಕಡಿಗೆ ಹಾಕಿದರೆ ಹುಳಕಡಿ ಗುಣವಾಗುತ್ತದೆ.

ತುಳಸಿ ರಸ + ಬೆಳ್ಳುಳ್ಳಿ.

ಹಿಡುಸೋಗೆ

ದವುಪ್ಪ ಅಥವಾ ಆಸ್ತಮಾ : ಚಿಕಿತ್ಸೆ : ಒಂದು ಹಿಡಿ ಆಡುಸೋಗೆ ಸೊಪ್ಪನ್ನು ಹಿಚಿಂಟುರಿ ಬೀಂಟುಸಿ ರಸ ತೆಗೆದು, ಎರಡು-ಮೂರು ಕರಿ ಮೆಣಸನ್ನು ಪುಡಿ ಮಾಡಿ ಸೇರಿಸಿ, ಒಂದು ದವುಪ ಜೇನು ತುಪ್ಪ ಬೆರೆಸಿ ಬೆಳಿಗ್ಗೆ ಖಾರಿ ಹೊಟ್ಟೆಗೆ ಒಂದು ವಾರ ಕಾಲ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಇದರಿಂದ ದವುಪ್ಪ ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಆಸ್ತಮಾ ರೋಗದ ಉಲ್ಬಣತೆ ಕಡಿಮೆಯಾಗುತ್ತದೆ

ನೆರಳಿನಲ್ಲಿ ಒಣಗಿದ ಆಡುಸೋಗೆ ಮತ್ತು ದತೂರಿ ಎಲೆಗಳನ್ನು ಸಮ ಪ್ರಮಾಣದಲ್ಲಿ ಬೆರೆಸಿ ಪುಡಿ ಮಾಡಿ ಬೀಡಿಯಂತೆ ಕಟ್ಟಿ ಸೇದುವುದರಿಂದ ದವಿಪ್ಪನ ಕೆಮ್ಮು ನಿವಾರಣೆಯಾಗುತ್ತದೆ.

ಕ್ಷಂತು: ಒಂದು ದವುಪ ಆಡುಸೋಗೆ ಹೂವಿನ ರಸ ತೆಗೆದು, ಅದಕ್ಕೆ ಒಂದು ದವುಪ ಜೇನು ತುಪ್ಪ ಸೇರಿಸಿ ದಿನಾ ಎರಡು ವೇಳೆ ತೆಗೆದುಕೊಳ್ಳಬೇಕು ಹೀಗೆ ಎರಡು ತಿಂಗಳ ಚಿಕಿತ್ಸೆಯಿಂದ ಕ್ಷಂತು ವಾಸಿಯಾಗುತ್ತದೆ. ?

ಹಸಿ ವೊಟ್ಟೆಯಂತನನ್ನು ಹಾರಿನಲ್ಲಿ ಹಾಕಿ ಜೇನುತುಪ್ಪ ಬೆರೆಸಿ ತೆಗೆದು ಕೊಳ್ಳುವುದು ಕ್ಷಂತು ರೋಗಿಗಳಿಗೆ ತುಂಬಾ ಸಹಾಯವಾಗುತ್ತದೆ.

ಜ್ವರ: ಒಂದು ಹಿಡಿ ಆಡುಸೋಗೆ ಸೊಪ್ಪಿಗೆ ಒಂದು ತುಂಡು ಬಜೆ, ಒಂದು ತುಂಡು ಶುಂಠಿ ಜಜ್ಜಿ ಹಾಕಿ ಕಷಾಂತು ಮಾಡಿ ಎರಡು ಹೊತ್ತು ಒಂದು ದವುಪ ಜೇನು ತುಪ್ಪ ಬೆರೆಸಿ ಕುಡಿಯುವುದರಿಂದ ಸಾಧಾರಣವಾಗಿ ಬರುವ ಜ್ವರ(ನೆಗಡಿ-ಜ್ವರ) ಹೋಗುತ್ತದೆ.

ಕಜ್ಜಿ, ಇಸಬು : ಆಡುಸೋಗೆ ಬಿಗುರಿಲಿಂಟುನನ್ನು ಸ್ವಲ್ಪ ಅರಿಶಿನ, ಗೋವುಮೂತ್ರ ಸೇರಿಸಿ ನುಣ್ಣಗೆ ಅರೆದು ಹಚ್ಚುವುದರಿಂದ ಕಜ್ಜಿ, ಇಸಬು, ನವೆ ಇತ್ಯಾದಿ ನಾಶವಾಗುತ್ತದೆ.

ಕುಷ್ಠರೋಗ: ಒಂದು ಹಿಡಿ ಆಡುಸೋಗೆ ಸೊಪ್ಪನ್ನು ಕುಟ್ಟಿ, ಒಂದು ಹಿಡಿ ಕಕ್ಕೆಕಾಂಯಿ ಅಥವಾ ಅದರ ಎಲೆಂಟುನನ್ನು ಬೆರೆಸಿ ಒಂದು ನಾಲ್ಕು ರೋಟ ನೀರಿನಲ್ಲಿ ಕಷಾಂತುಕ್ಕಿಟುಟ್ಟ ಒಂದು ರೋಟದವರೆಗೆ ಬತ್ತಿಸಬೇಕು. ಇದನ್ನು ಸೋಸಿ ತೆಗೆದು ಎರಡು ದವುಪ ಹರಳೆಣ್ಣಿಂಟುನನ್ನು ಸೇರಿಸಿಟುಟ್ಟು ಕೊಂಡು ದಿನಾ ಬೆಳಿಗ್ಗೆ ಬರೀ ಹೊಟ್ಟೆಗೆ ಒಂದು ದವುಪ ಕುಡಿಂಟುಬೇಕು. ಥೇದಿಯಾಗಲು ಸ್ವಾರಂಭವಾದರೆ ಔಷಧಿಂಟು ಪ್ರಮಾಣವನ್ನು ಕಡಿಮೆ ಮಾಡ ಬಹುದು. ಹೀಗೆ ನಲವತ್ತು-ಅರವತ್ತು ದಿನ ತೆಗೆದುಕೊಂಡರೆ ಕುಷ್ಠರೋಗ ನಿವಾರಣೆಯಾಗುತ್ತದೆ.

ನಾಲ್ಕ

ಅಧಿಕ ಮೂತ್ರಸ್ರಾವ: ಎರಡ್ಮು ಪವುಡ ಆಡುಸೋಪ್ಪಗೆ ಸೊಪ್ಪಿನ ರಸಕ್ಕೆ ಒಂದು ಪವುಡ ಜೀನುತುಪ್ಪ ಬೆರೆಸಿ ತೆಗೆದುಕೊಂಡರೆ ಮೂತ್ರಸ್ರಾವ ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಸ್ರಾವ ಇರುವ ಮೂರು ದಿನವೂ ಇದನ್ನು ತೆಗೆದು ಕೊಳ್ಳಬೇಕು. ದಿನಕ್ಕೆ ಎರಡು ಸಲ ತೆಗೆದುಕೊಂಡರೆ ಒಳ್ಳೆಯದು.

ಕಫ: ಎರಡು ಪವುಡ ಆಡುಸೋಪ್ಪಗೆ ಸೊಪ್ಪಿನ ರಸಕ್ಕೆ ಎರಡು ಪವುಡ ಹಸಿ ಈರುಳ್ಳಿ ರಸವನ್ನು, ಒಂದು ಪವುಡ ಜೀನುತುಪ್ಪವನ್ನು ಬೆರೆಸಿ ದಿನಕ್ಕೆ ಮೂರು ಹೊತ್ತು ತೆಗೆದುಕೊಂಡರೆ ಕಫ ಸಂಪೂರ್ಣ ನಿವಾರಣೆಯಾಗುತ್ತದೆ.

ಶ್ರೀಗಂಧ

ತಲೆನೋವು:ಚಿಕಿತ್ಸೆ: ಶ್ರೀಗಂಧವನ್ನು ನೀರಿನಲ್ಲಿ ತೇದು ಹಣೆಗೆ ಪೆತ್ತಬೇಕು. ಎರಡು ದಿನದ ಉಪಚಾರದಿಂದ ತಲೆನೋವು ಗುಣವಾಗುತ್ತದೆ.

ಉರಿಮೂತ್ರ: ಶ್ರೀಗಂಧವನ್ನು ನೀರಿನಲ್ಲಿ ತೇದು ಒಂದು ಚಮಚ ಕಲ್ಲು ಸಕ್ಕರೆ ಹಾಕಿ ಒಂದು ಲೋಟ ಮಜ್ಜಿಗೆಯಲ್ಲಿ ಕದಡಿ ಕುಡಿಯುವುದರಿಂದ ಉರಿ ಮೂತ್ರ ನಿವಾರಣೆಯಾಗುತ್ತದೆ. ದಿನಕ್ಕೆ ಎರಡು ಬಾರಿಯಂತೆ ಮೂರು ದಿನ ಈ ಚಿಕಿತ್ಸೆಯನ್ನು ಮಾಡಬೇಕು.

ಕಜ್ಜಿ: ಮೊಸರಿನಲ್ಲಿ ಗಂಧವನ್ನು ತೇದು ಹಚ್ಚುವುದರಿಂದ ಕಜ್ಜಿ, ಮೊಡವೆಗಳು ಗುಣವಾಗುತ್ತವೆ. ಈ ಉಪಚಾರ ಮೂರು–ನಾಲ್ಕು ದಿನ ಮಾಡಬೇಕು.

ಮೊಡವೆ: ಶ್ರೀಗಂಧ ಮತ್ತು ಅರಿಶಿನ ಕೊಂಬುಗಳನ್ನು ತೇದು ಹಾಲಿನ ಕೆನೆಯನ್ನು ಬೆರೆಸಿ ಮೊಡವೆಗಳಿಗೆ ಹಚ್ಚಬೇಕು. ಹೀಗೆ ಒಂದು ವಾರ — ೪ ದಿನ ಮಾಡಿದರೆ ಮೊಡವೆ ಹೇಳ ಹೆಸರಿಲ್ಲದಂತೆ ಹೋಗಿಬಿಡುತ್ತದೆ.

ಕಿವಿ ಸೋರುವುದು: ನಾಲ್ಕೈದು ತೊಟ್ಟು ಗಂಧದ ಎಣ್ಣೆಯನ್ನು ನಾಲ್ಕೈದು ದಿನ ಸೋರುವ ಕಿವಿಗೆ ಹಾಕುತ್ತಾ ಬಂದರೆ ಕಿವಿ ಸೋರುವುದು ನಿಂತು ಹೋಗುತ್ತದೆ.

ನಾಯಿಕೆಮ್ಮು: ಶ್ರೀಗಂಧವನ್ನು ಜೇನುತುಪ್ಪದಲ್ಲಿ ತೇದು ನಾಲಿಗೆ ಮೇಲೆ ಆಗಾಗ ಹಚ್ಚುತ್ತಿದ್ದರೆ ನಾಯಿ ಕೆಮ್ಮು ಪಾಸಿಯಾಗುತ್ತದೆ. ನಾಲ್ಕೈದು ದಿನ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕು.

ವಾಂತಿ: ಶ್ರೀಗಂಧವನ್ನು ನೆಲ್ಲಿಕಾಯಿ ರಸದಲ್ಲಿ ತೇದು ಒಂದು ಜವುಡ ಜೇನಿನೊಂದಿಗೆ ಬೆರೆಸಿ ನೆಕ್ಕಿಸುವುದರಿಂದ ವಾಂತಿ ನಿಂತು ಹೋಗುತ್ತದೆ.

ದಾಳಿಂಬೆ

ಅತಿಭೇದಿ: ಚಿಕಿತ್ಸೆ: ದಾಳಿಂಬೆ ಹಣ್ಣಿನ ರಸವನ್ನು, ಇಲ್ಲದಿದ್ದರೆ ಒಣಗಿದ ಇದರ ಹಣ್ಣಿನ ಸಿಪ್ಪೆಯಂತನ್ನು ಪುಡಿ ಮಾಡಿ ಕಲ್ಲು ಸಕ್ಕರೆಯೊಂದಿಗೆ ಬೆರೆಸಿ ಕೊಡಬೇಕು.

ದಾಳಿಂಬೆ ಬೇರಿಗನ್ನು ಎದೆ ಹಾಲಿನಲ್ಲಿ ಕಲೆಸಿ ನೆಕ್ಕಿಸುವುದರಿಂದಲೂ ಭೇದಿ ನಿಲ್ಲುತ್ತದೆ.

ರಕ್ತ ಭೇದಿ: ದಾಳಿಂಬೆ ಹಣ್ಣಿನ ಸಿಪ್ಪೆ ಮತ್ತು ಬಿಗುರೆರಿಗಳನ್ನು ಬೆನ್ನಾಗಿ ಅರೆದು ಮಜ್ಜಿಗೆಯಲ್ಲಿ ಬೆರೆಸಿ ತೆಗೆದುಕೊಳ್ಳುವುದರಿಂದ ರಕ್ತಭೇದಿ ನಿಲ್ಲುತ್ತದೆ. (ತೆಗೆದುಕೊಳ್ಳುವ ಮೊದಲು ಕಬ್ಬಿಣದ ಕೊಳಲನ್ನು ಕೆಂಪಗೆ ಕಾಯಿಸಿ ಈ ವಿಶ್ರಾಣದಲ್ಲಿ ಆದ್ದಬೇಕು.) ?

ಹೊಟ್ಟೆ ಹುಳು: ದಾಳಿಂಬೆ ಗಿಡದ ತೊಗಟೆಯಂತನ್ನು ಬೆನ್ನಾಗಿ ಜಜ್ಜಿ ರಸ ತೆಗೆದು ಜೀನುತುಪ್ಪದಲ್ಲಿ ಬೆರೆಸಿ ಕೊಟ್ಟರೆ ಲಾಡಿ ಹುಳು ಸತ್ತು ಹೊರ ಬರುತ್ತದೆ.

ರಕ್ತ ಪಿತ್ತ: ದಾಳಿಂಬೆ ಹೂವಿನ ರಸವನ್ನು ತೆಗೆದು ಮುಗಿನಲ್ಲಿ ಒಂದೆರಡು ತೊಟ್ಟು ಹಾಕುವುದರಿಂದ ರಕ್ತ ಪಿತ್ತ ನಿವಾರಣೆಯಾಗುತ್ತದೆ.

ಗುರಿಮುಖಾತ್ರ: ಒಂದು ಹಿಡಿ ಕೊತ್ತಂಬರಿ ಬೀಜವನ್ನು ಒಂದು ಲೋಟ ನೀರಿನಲ್ಲಿ ಕುದಿಸಿಟ್ಟು ಕೊಳ್ಳಬೇಕು. ಒಂದು ದಾಳಿಂಬೆ ಹಣ್ಣಿನ ಬೀಜಗಳನ್ನು ಕಿವುಚಿ ಆ ರಸವನ್ನು ಈ ನೀರಿಗೆ ಬೆರೆಸಿ ಆಗಾಗಿಗೆ ಕುಡಿಯುತ್ತಿದ್ದರೆ ಗುರಿ ಮುಖಾತ್ರ ವಾಸಿಯಾಗುತ್ತದೆ.

ರಕ್ತಹೀನತೆ: ಒಂದು ಹಿಡಿ ದಾಳಿಂಬೆ ಎಲೆಯನ್ನು ಅರೆದು ಮೊಸರಿನಲ್ಲಿ ಬೆರೆಸಿ ದಿನಾ ಕುಡಿಯುತ್ತಿದ್ದರೆ ಗರ್ಭಿಣಿ ಹೆಂಗಸರಲ್ಲಿ ಕಂಡು ಬರುವ ರಕ್ತ ಹೀನತೆ ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಆರನೇ ತಿಂಗಳಲ್ಲಿ ಈ ಉಪಚಾರ ಮಾಡಬೇಕು.

ಎಕ್ಕ

ದವುಪ್ಪರೋಗ:ಚಿಕಿತ್ಸೆ: ಬರಿತ ಎಕ್ಕದ ಬೇರನ್ನು ಸುಟ್ಟು ಭಸ್ಮ ಮಾಡಿ ಇಟ್ಟುಕೊಳ್ಳಬೇಕು. ಒಂದು ದವುದ ಭಸ್ಮಕ್ಕೆ ಒಂದು ಬಿಟಿಕೆ ಪ್ರಮಾಣದಲ್ಲಿ ಉಪ್ಪನ್ನು, ಒಂದು ಬೀ ದವುದ ಜೀನು ತುಪ್ಪವನ್ನು ಬೆರೆಸಿ ಪ್ರತಿ ದಿನ ಬೆಳಿಗ್ಗೆ ಮತ್ತು ಸಾಂಯಂಕಾಲ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಇಪ್ಪತ್ತು ದಿನಗಳ ಕಾಲ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕು. ಇದರಿಂದ ದವುಪ್ಪ ವಾಸಿಯಾಗುತ್ತದೆ

ಕಿವಿ ನೋವಿರುವುದು: ಹಣ್ಣಾದ ಎಕ್ಕದ ಎಲೆಗಳನ್ನು ಕೆಂಡದ ಮೇಲೆ ಬಿಸಿ ಮಾಡಿ, ಜಜ್ಜಿ ರಸ ಹಿಂಡಿ ಹತ್ತಾರು ತೊಟ್ಟು ಬಿಳಿಯನೆಂತು ರಸವನ್ನು ಕಿವಿಗೆ ಬಿಟ್ಟು ಹತ್ತಿ ಇಟ್ಟುಬಿಡಬೇಕು. ಮೂರಾರು ದಿನ ದಿನಕೊಂದು ಬಾರಿಯಂತೆ ಹೀಗೆ ಮಾಡಿದರೆ ಕಿವಿ ನೋವಿರುವುದು ನಿಲ್ಲುತ್ತದೆ.

ಬಿಳಿತೊನ್ನು: ಬರಿತ ಎಕ್ಕದ ಒಂದು ತುಂಡು ಬೇರನ್ನು ಒಂದು ತುಂಡು ಅರಿಶಿನ ಬೇರಿಗೆ ಜೀರಿಗೆ ಗೋವಮೂತ್ರದಲ್ಲಿ ತೇದು ಬಿಳಿತೊನ್ನು ಇರುವ ಭಾಗದಲ್ಲಿ ಹಚ್ಚುತ್ತಲೇ ಬಂದರೆ ಗುಣ ಕಂಡು ಬರುತ್ತದೆ.

ಸ್ತನದಲ್ಲಿ ನೋವು: ಬರಿತ ಎಕ್ಕದ ಎಲೆಗಳನ್ನು ಬಿಸಿ ಮಾಡಿ ಸ್ತನಗಳಿಗೆ ಕಟ್ಟುವುದರಿಂದ ಇಂತಹ ನೋವು ನಿವಾರಣೆಯಾಗುತ್ತದೆ.

ಆನೆಕಾಲು ರೋಗ: ಎಕ್ಕದ ಬೇರಿನ ಸಿಪ್ಪೆಯಂತನ್ನು ತೆಗೆದಿಟ್ಟುಕೊಳ್ಳಬೇಕು. ಅನ್ನದ ಗಂಜಿಯಂತನ್ನು ಬಸಿದಿಟ್ಟು ಮಾರನೆಂತು ದಿನ ಅದರಲ್ಲಿ ಈ ಸಿಪ್ಪೆಯಂತನ್ನು ತೇದು ರೋಗ ಬಂದ ಕಾಲಿಗೆ ಹಚ್ಚಿ ಹಾಗೆಯೇ ಬಿಟ್ಟು ಬಿಡಬೇಕು. ಹೀಗೆ ಇಪ್ಪತ್ತು ದಿನ ಮಾಡುವುದರಿಂದ ರೋಗ ಗುಣ ಕಾಣುತ್ತದೆ. ಚಿಕಿತ್ಸೆ ಮಾಡುತ್ತಿರುವ ಸಮಯದಲ್ಲಿ ಒಂದು ದವುದ ಗಂಧವನ್ನು ಬಸಿ ನೀರಿನಲ್ಲಿ ಸೇರಿಸಿ ಕುಡಿಯುತಬೇಕು.

ಮೂಲವಾಕ್ಕಡಿ: ಒಂದು ಹಿಡಿ ನುಗ್ಗೆ ಸೊಪ್ಪನ್ನು ತೊಳೆದು, ರುಬ್ಬಿ ನುಣ್ಣಗೆ ಅರೆದು ಒಂದು ದವುದ ಎಕ್ಕದ ಹಾಲಿನಲ್ಲಿ ಒಂದು ದವುದ ಅರಿಶಿನ ಪುಡಿಯೊಂದಿಗೆ ಬೆರೆಸಿ ಮೊಳಕೆ ಬಂದ ಜಾಗಕ್ಕೆ ಹಚ್ಚಬೇಕು. ರಾತ್ರಿ ಹೊತ್ತು ಹಚ್ಚಿ ಮರುದಿನ ಬೆಳಿಗ್ಗೆ ಎದುರು ಸ್ವಚ್ಛ ಮಾಡಬೇಕು. ಒಂದು ವಾರ ಇಂತಹ ಚಿಕಿತ್ಸೆಯಿಂದ ಮೊಳಕೆ ಸಂಪೂರ್ಣ ನಶಿಸಿ ಹೋಗುತ್ತದೆ. ಚಿಕಿತ್ಸೆ ಪ್ರಾರಂಭದಲ್ಲಿ ಸ್ವಲ್ಪ ಉರಿ ಆಗಬಹುದು. ಉರಿಯಾದರೆ ಸ್ವಲ್ಪ ಜೀನುತುಪ್ಪ ಬೆರೆಸಿ ಹಚ್ಚಿರಿ.

ಉತ್ತರಾಣಿ

ಮೂಲವ್ಯಾಧಿ: ಚಿಕಿತ್ಸೆ: ಒಂದು ಹಿಡಿ ಉತ್ತರಾಣಿ ಸೊಪ್ಪನ್ನು ಐದು ಕರಿ ಮೆಣಸಿನ ಕಾಳಿನೊಂದಿಗೆ ನುಣ್ಣಗೆ ಅರೆದು ಪ್ರತಿ ದಿನ ಎರಡು ವೇಳೆ ಸೇವಿಸುವುದರಿಂದ ಮೂಲವ್ಯಾಧಿ ವಾಸಿಯಾಗುತ್ತದೆ.

ಒಂದು ಹಿಡಿ ಉತ್ತರಾಣಿ ಎಲೆಯನ್ನು ಸುಟ್ಟು ಬೂದಿ ಮಾಡಿ ಒಂದು ಲೋಟ ನೀರಿನಲ್ಲಿ ಕದಡಿ ಸೋಸಿ ಒಂದು ತುಂಡು ಶುಂಠಿಯನ್ನು ನಂಜುವಾಗಿ ಪುಡಿ ಮಾಡಿ ಹಾಕಿ ಸೇವಿಸುವುದರಿಂದಲೂ ಮೂಲವ್ಯಾಧಿ ವಾಸಿಯಾಗುತ್ತದೆ ಒಂದು ವಾರವಾದರೂ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕು.

ಉತ್ತರಾಣಿ ಬೀಜವನ್ನು ದಿನಾಲ್ಕಿ ಕುಟ್ಟಿ ಪುಡಿ ಮಾಡಿ ಪ್ರತಿ ದಿನ ಬೆಳಿಗ್ಗೆ-ರಾತ್ರಿ ಒಂದು ಸಣ್ಣ ಚಮಚದಷ್ಟು ಸೇವಿಸುವುದರಿಂದ ಮೂಲವ್ಯಾಧಿ ಕಡಿಮೆಯಾಗುತ್ತದೆ.

ಅತಿಸಾರ ಅಥವಾ ಆಮಶಂಕೆ: ಒಂದು ಹಿಡಿ ಉತ್ತರಾಣಿ ಎಲೆಯನ್ನು ಕಷಾಯ ಮಾಡಿ ಕಲ್ಲು ಸಕ್ಕರೆ ಸೇರಿಸಿ ಆಗಾಗೆ ಕುಡಿಯುತ್ತಿದ್ದರೆ ಆಮಶಂಕೆ ನಿಲ್ಲುತ್ತದೆ.

ರಕ್ತಪಿತ್ತ: ಎರಡು ಹಿಡಿ ಉತ್ತರಾಣಿ ಸೊಪ್ಪನ್ನು ಅರೆದು ಒಂದು ಚಮಚ ಜೀರಿಗೆಪುಡಿ ಸೇರಿಸಿ ಬೆಳಿಗ್ಗೆ ಹೊತ್ತಿನಲ್ಲಿ ಕುಡಿಯುವುದರಿಂದ ರಕ್ತಪಿತ್ತ ನಿವಾರಣೆಯಾಗುತ್ತದೆ.

ಕಿವಿಯಲ್ಲಿ ತೊಂದರೆ: ಉತ್ತರಾಣಿ ಎಲೆಯನ್ನು ಬೂದಿ ಮಾಡಿ ಎಳ್ಳೆಣ್ಣೆಯಲ್ಲಿ ಸೇರಿಸಿ ಮುಖಕ್ಕೆ ಹಾಕುವುದರಿಂದ ಕಿವಿಸದುವಿಕೆ, ಕಿವಿಯಲ್ಲಿ ರಕ್ತ ಸೋರುವುದು, ತಾತ್ಕಾಲಿಕ ಕಿವುಡು ವಾಸಿಯಾಗುತ್ತದೆ.

ಉಳುಕು: ಉತ್ತರಾಣಿ ಎಲೆಯ ಜೊತೆ ಹರಳೆಣ್ಣೆಯನ್ನು ಹಾಕಿ ಅರೆದು ಉಳುಕಿದ ಜಾಗಕ್ಕೆ ಹಚ್ಚಿ ಉಳುಕು ತೆಗೆಯಬಹುದು.

ಹಾಗಲಕಾಯಿ

ಅತಿ ಮುತ್ರಸಾ್ರವ, ಮಂಬಿ್ಲನ ಹೊಟೆ್ಟ ನೋವಿ :ಚಿಕಿತೆ್ಸ: ಒಂದು ಹಿಡಿ ಹಾಗಲಕಾಂಯ ಎಲೆಂಯನ್ನು ತೆಗೆದುಕೊಂಡು ಎರಡು ಮೆಣಸಿನ ಕಾಳು, ಎರಡು ಹಳಕು ಬೆಳ್ಳುಳ್ಳಿ ಹಾಕಿ ಮೆನ್ನಗಿ ಅರೆದು ಒಂದು ಲೋಟ ನೀರಿನಲ್ಲಿ ಕರಗಿಸಬೇಕು. ಒಂದು ಕಬ್ಬಿಣದ ತುಂಡನ್ನು ಕೆಂಪಗೆ ಕಾಯಿಸಿ ಈ ದಿಶ್ರಣದಲ್ಲಿ ಅದ್ದಬೇಕು. ನಂತರ ದಿಶ್ರಣವನ್ನು ಕುಡಿಯಬೇಕು. ಮೂರು ದಿನ ಖಾಲಿ ಹೊಟೆ್ಟಗೆ ಈ ಚಿಕಿತೆ್ಸಯಂತೆಯನ್ನು ಮಾಡಬೇಕು. ಮುಟಾ್ಟಗುವ ಮುನ್ನಾರು ದಿನ ಮುಂಚೆ ಮಾಡಿದರೆ ತುಂಬಾ ಒಳ್ಳೆಯದು. ಮುಟಾ್ಟದ ನಂತರವೂ ಮಾಡಬಹುದು.

ಹೊಟೆ್ಟ ಹುಳ: ಎಳೆಯ ಮಕ್ಕಳಲ್ಲಿ(ಒಂದು ತಿಂಗಳು) ಹೊಟೆ್ಟ ಹುಳ ಇರುವುದು ಕಂಡು ಬಂದರೆ ಹಾಗಲ ಎಲೆಯ ರಸ ತೆಗೆದು, ಒಂದು ಚಮಚದಷ್ಟು ಖಾಲಿ ಹೊಟೆ್ಟಗೆ ಕುಡಿಸಬೇಕು. ದಿನ ಬಿಟ್ಟು ದಿನ, ಮೂರು ದಿನ ಈ ಚಿಕಿತೆ್ಸ ಮಾಡಬೇಕು. ಹೊಟೆ್ಟ ಕಬ್ಬಿದ್ದರೂ ಇದರಿಂದ ಸಹಾಯವಾಗುತ್ತದೆ.

ಕಾಮಾಲೆ: ಎರಡು ಚಮಚ ಹಾಗಲಕಾಯಿ ರಸಕ್ಕೆ ಒಂದು ಚಮಚ ಜೇನುತುಪ್ಪವನ್ನು ಬೆರೆಸಿ ಖಾಲಿ ಹೊಟೆ್ಟಗೆ ನಾಲ್ಕು ದಿನ ತೆಗೆದುಕೊಳ್ಳಬೇಕು.

ಬಾಳೆ

ಮೂತ್ರ ಪಿಂಡದ ತೊಂದರೆ: ಚಿಕಿತ್ಸೆ: ಮೂತ್ರ ಪಿಂಡದ ಯಾವುದೇ ತೊಂದರೆಗೆ ಬಾಳೆಯಿಂದ ದಿಂಡನ್ನು ಆಹಾರದಲ್ಲಿ ಹೆಚ್ಚಾಗಿ ಉಪಯೋಗಿಸುವುದರಿಂದ ಉತ್ತಮವಾಗುತ್ತದೆ.

ಬಿಳಿಸೆರಗು: ಬಾಳೆಯಿಂದ ಹಣ್ಣಿನ ಮಧ್ಯಭಾಗವನ್ನು ತೆಗೆದುಕೊಂಡು ಎರಡು ಬಿಟ್ಟದ ನೆಲ್ಲಿಕಾಯಿ, ಒಂದು ತುಂಡು ಕಲ್ಲುಸಕ್ಕರೆಯಿಂದನ್ನು ಜಜ್ಜಿ ಬೆರೆಸಿ, ಒಂದುಚಮಚ ಜೇನುತುಪ್ಪವನ್ನು ಬೆರೆಸಿ ಬರಿಯ ಹೊಟ್ಟೆಗೆ ನಾಲ್ಕು ದಿನ ತೆಗೆದುಕೊಂಡರೆ ಬಿಳಿಸೆರಗು ವಾಸಿಯಾಗುತ್ತದೆ.

ಎದೆನೋವು: ಬಾಳೆಯಿಂದ ಹೂವಿನ ದಳ್ಳವನ್ನು ಬೇಳೆಯಿಂದ ಜೊತೆ ತಂಬೂರಿಸಿ ಒಂದು ನಾಲ್ಕು ದಿನ ತಿಂದರೆ ಸಾಮಾನ್ಯ ಎದೆನೋವು ಹೋಗಿ ಬಿಡುತ್ತದೆ.

ಮುಟ್ಟಿನ ಹೊಟ್ಟೆನೋವು: ಬಾಳೆಹಣ್ಣನ್ನು ಮೊಸರಿನಲ್ಲಿ ಕಿವುಚಿ ತೆಗೆದುಕೊಂಡರೆ ಮುಟ್ಟಿನ ಹೊಟ್ಟೆ ನೋವು ನಿಂತು ಬಿಡುತ್ತದೆ.

ಪಪಾಯ

ರಾತ್ರಿ ಕುರುಡು:ಚಿಕಿತ್ಸೆ: ದಿನಾ ಬೆಳಿಗ್ಗೆ ಬರೀ ಹೊಟ್ಟೆಯಲ್ಲಿ ಒಂದು ಕಾಲು ಭಾಗದಷ್ಟು ಪರಂಗಿ ಹಣ್ಣನ್ನು ಸೇವಿಸುತ್ತಾ ಹೋದರೆ ರಾತ್ರಿ ಕುರುಡು ಕ್ರಮೇಣ ಕಡಿಮೆಯಾಗುತ್ತದೆ.

ಉಪಯೋಗ

ಇದರ ಜೊತೆಗೆ ದಿನಾಲೂ ಎರಡು ಕಾಕರೆಟ್, ಒಂದು ಹಿಡಿ ನುಗ್ಗೇ ಸೊಪ್ಪು, ಯಾವುದೇ ಹಳದಿ ತರಕಾರಿ, ಹಣ್ಣುಗಳನ್ನು ಸೇವಿಸುತ್ತಾ ಹೋದರೆ ಒಂದೇ ತಿಂಗಳಲ್ಲಿ ಗುಣ ಕಾಣುತ್ತದೆ.

ಹೊಟ್ಟೆ ಹುಳ: ಪಪಾಯ ಹಣ್ಣಿನ ಬೀಜವನ್ನು ಒಣಗಿಸಿಟ್ಟುಕೊಂಡು ಪುಡಿ ಮಾಡಿ ಹಸುವಿನ ಹಾಲಿಗೆ ಎರಡು ಬೀ ಪವುದದಷ್ಟು ಪುಡಿಯನ್ನು ಹಾಕಿ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಮಕ್ಕಳಿಗಾದರೆ ಒಂದೇ ಸಾಕು. ಇದು ಹೊಟ್ಟೆ ಹುಳುವಿಗೆ ತುಂಬಾ ಪರಿಣಾಮ.

ಬೀಜ ಪುಡಿ - ಕಾಲು

ಕುರ: ಪಪಾಯ ಮಿಡಿಯನ್ನು ಇಡಿಯಾಗಿ ಅರೆದು ಕುರ ಇದ್ದ ಜಾಗಕ್ಕೆ ಬಾಳೆಯಲೆಯಿಂದ ಕಟ್ಟಿದರೆ, ಮೂರನೆಯ ದಿನಕ್ಕೆ ಕುರ ಒಡೆದು ಹೋಗುತ್ತದೆ.

ಜೀರ್ಣ ಶಕ್ತಿಗೆ: ಊಟವಾದ ನಂತರ ಪಪಾಯದ ಒಂದು ಹೋಳನ್ನು ತಿನ್ನುವುದರಿಂದ ಆಹಾರ ಜೀರ್ಣವಾಗಲು ಸಹಾಯವಾಗುತ್ತದೆ.

ಬಸರಿ ಹೆಂಗಸರು ಪಪಾಯ ಹಣ್ಣು ತಿನ್ನುವುದರಿಂದ ಗರ್ಭಪಾತವಾಗ ಬಹುದೆಂದು ಹೆದರುತ್ತಾರೆ. ಆದರೆ ಇದರಲ್ಲಿ ಸತ್ಯಾಂಶವಿಲ್ಲ. ಕಾಯಿ ಪಪಾಯದಿಂದ ಒಂದು ವೇಳೆ ಇಂತಹ ಅಪಾಯವಿದ್ದರೂ ಇರಬಹುದು, ಹಣ್ಣು ಮಾತ್ರ ದೋಷವುಕ್ತ.

ಸೇವಿಸಬಹುದು

ಕಳ್ಳ (ಕಾಚಿ)

ರಕ್ತಭೇದಿ:ಚಿಕಿತ್ಸೆ: ಮೂರು ದವಡೆ ಕಳ್ಳಿ ಹಾಲನ್ನು ಒಂದು ಲೋಟ ಹಸೀ ಹಸುವಿನ ಹಾಲಿನ ಜೊತೆಗೆ ಮಾಲಿ ಹೊತ್ತಿಗೆ ತೆಗೆದುಕೊಂಡರೆ ರಕ್ತಭೇದಿ ನಿವಾರಣೆಯಾಗುತ್ತದೆ. ಮೂರು ದಿನ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಿ.

ಹರ್ಲಿನ ತೊಂದರೆ: ವಸಡಿನಲ್ಲಿ ರಕ್ತ ಬರುವುದು, ಹಲ್ಲು ನೋವು ಇತ್ಯಾದಿ ತೊಂದರೆಗಳಿಗೆ ದಿನಾ ಬೆಳಿಗ್ಗೆ ಕಳ್ಳಿಯಿಂದ ಹಲ್ಲುಜ್ಜಿದರೆ ಗುಣ ಕಾಣುತ್ತದೆ.

ತಲೆ ಸುರಿ: ಕಳ್ಳಿಯಿಂದ ಎಲೆಗೆ ಹರಳೆಣ್ಣೆ ಸವರಿ ತಲೆಯಿಂದ ಮೇಲೆ ಕಟ್ಟಬೇಕು. ಹಾಗೆ ಮೂರು-ನಾಲ್ಕು ಗಂಟೆಗಳ ಕಾಲ ಬಿಡಬೇಕು. ಹೀಗೆ ಮೂರು ನಾಲ್ಕು ಗಂಟೆಗಳ ಕಾಲ ಬಿಟ್ಟು ಮಾಡಿದರೆ ಮೂರು-ನಾಲ್ಕು ದಿನ ಮಾಡುವಷ್ಟರಲ್ಲಿ ತಲೆ ಸುರಿ ಕಡಿಮೆಯಾಗುತ್ತದೆ.

ಸೂಚನೆ: ಕಳ್ಳಿಹಾಲು ಕಣ್ಣಿಗೆ ಬಿದ್ದರೆ ಕಣ್ಣು ಕುರುಡಾಗುತ್ತದೆ.

ಮುಟ್ಟಿದರೆ ಮುನಿ (ನಾಚಿಕೆ ಮುಳ್ಳು)

ಉಪಯುಕ್ತ

ಅಧಿಕ ಮುತುಸಾ್ರವ: ಚಿಕಿತೆ್ಸ: ಬೇರು ಸಮೇತ ಮುಟ್ಟಿದರೆ ಮುನಿಗಿಡ ತೆಗೆದುಕೊಂಡು ಬೇಯಿಸಿ ಆದರ ರಸವನ್ನು ಕುಡಿಸಬೇಕು. ಮೂರು ದಿನ ಹೀಗೆ ಮಾಡಿದರೆ ಅಧಿಕ ಮುತುಸಾ್ರವ ಕಡಿಮೆಯಾಗುತ್ತದೆ.

ತಲೆಯಲ್ಲಿ ಹುಣ್ಣು: ಮುಟ್ಟಿದರೆ ಮುನಿ ಗಿಡದ ಬೇರನ್ನು ಎಣ್ಣೆಯಲ್ಲಿ ಬೆನ್ನಾಗಿ ಕುದಿಸಿ ಹಚ್ಚಿದರೆ ಕೀವು ಹೊರಬಂದು ಹುಣ್ಣು ಮಾಯಾಗುತ್ತದೆ.

ಪ್ರಕೃತಿ ಉಪಯುಕ್ತ

ಅತಿ ಭೇದಿ: ಮಕ್ಕಳಿಗೆ ಅತಿಭೇದಿಯಾಗಿ ಗುದದ್ವಾರ ಹೊರಗೆ ಜರುಗಿದರೆ, ಮುಟ್ಟಿದವರೆ ಮುನಿ ನೊಪ್ಪನ್ನು ಬೆನ್ನಾಗಿ ಅರೆದು ಗುದದ್ವಾರಕ್ಕೆ ದಪ್ಪಕ್ಕೆ ಹಚ್ಚಿ ಕಟ್ಟಿ ಹಾಕಬೇಕು. ಹೊರಗೆ ಜರುಗಿದ ಭಾಗ ನಾಲ್ಕು ದಿನ ಈ ಚಿಕಿತೆ್ಸ ಮಾಡಿದರೆ ಕ್ರಮೇಣ ಒಳಗೆ ಹೋಗಿಬಿಡುತ್ತದೆ.

ಮುಟ್ಟಿನ ಹೊಟ್ಟೆ ನೋವು: ಮುಟ್ಟಿದರೆ ಮುನಿ ಎಲೆಯನ್ನು ಜಜ್ಜಿ ರಸ ತೆಗೆದು ಒಂದು ಬೀ ಡವುಡ ರಸಕ್ಕೆ ಸ್ವಲ್ಪ ಕಲ್ಲುಸಕ್ಕರೆ ಬೆರೆಸಿ ತೆಗೆದುಕೊಂಡರೆ ಮುಟ್ಟಿನ ಹೊಟ್ಟೆ ಹೋವು ಕಡಿಮೆಯಾಗುತ್ತದೆ. ಮೂರು ದಿನ ಈ ಚಿಕಿತೆ್ಸ ದಿನಕೊಂದಾವರ್ತಿಯಂತೆ ಮಾಡಬೇಕು.

ಹರಳು

ಅರಿಶಿನ ಕಾವಮಾಲಿ: ಚಿಕಿತ್ಸೆ: ಒಂದು ಹಿಡಿ ಹರಳಿನ ಬಿಗುರೆಲಿ ತೆಗೆದು ಕೊಂಡು ಒಂದು ತುಂಡು ಅರಿಶಿನ ಕೊಂಬನ್ನು ಹಾಕಿ ಪೆನ್ನಾಗಿ ಅರೆದು ಗುಂಡಿ ಮಾಡಿಕೊಳ್ಳಬೇಕು. ಗೊಬ್ಬರಿ ಗಾತ್ರದಷ್ಟು ಈ ಗುಂಡಿಂತನನ್ನು ಕಾಂತುಸಿದ ಹಸುವಿನ ಹಾಲಿನಲ್ಲಿ ಬೆಳಿಗ್ಗೆ ಬರೀ ಹೊಟ್ಟೆಗೆ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಹೀಗೆ ನಾಲ್ಕೈದು ದಿನ ತೆಗೆದುಕೊಂಡರೆ ಕಾವಮಾಲಿ ವಾಸಿಂತಾಗುತ್ತದೆ.

ಹೊಟ್ಟೆಂತರಿಲ್ಲ ಹುಳ: ಒಂದು ಬೀ ದವುದದಷ್ಟು ಹರಳೆಣ್ಣಿಂತನನ್ನು ಬರೀ ಹೊಟ್ಟೆಗೆ ತೆಗೆದುಕೊಂಡರೆ ಹೊಟ್ಟೆ ಹುಳಗಳಿದ್ದರೆ ಬೀಳುತ್ತದೆ. ಹೊಟ್ಟೆ ಕಟ್ಟಿದ್ದರೂ ಇದರಿಂದ ಸಹಾಂತವಾಗುತ್ತದೆ.

ತಲೆ-ಮೈ-ಕೈ ಉರಿ: ಹರಳೆಣ್ಣಿಂತನನ್ನು ತಲೆ, ಮೈ-ಕೈಗೆ ಹಚ್ಚಿ ಸಾನ ಮಾಡಬೇಕು. ಹರಳಿನ ಎಲೆಗೆ ಹರಳೆಣ್ಣಿ ಹಚ್ಚಿ ತಲೆಗೆ ಕಟ್ಟಿಕೊಂಡು ಒಂದು ಇಡೀ ದಿನ ಬಿಟ್ಟರೆ ತಲೆ ಉರಿ ಹೆಸರಿಲ್ಲದೆ ಹೋಗುತ್ತದೆ.

ಹೊಟ್ಟೆ ಉಬ್ಬರ: ಹರಳಿನ ಎಲೆಂತನನ್ನು ಬಿಸಿ ಮಾಡಿ ಹೊಟ್ಟೆ ಮೇಲೆ ಸ್ವಲ್ಪ ಹೊತ್ತು ಇಡುವುದರಿಂದ ಹೊಟ್ಟೆ ಉಬ್ಬರ ಕಡಿಮೆಂತಾಗುತ್ತದೆ.

ಮುಟ್ಟಿನ ಹೊಟ್ಟೆ ನೋವು: ಮುಟ್ಟಿನ ಹೊಟ್ಟೆ ನೋವಿಗೆ ಹರಳಿನ ಎಲೆಂತನನ್ನು ಶಾಖ ಮಾಡಿ ನೋವಿನ ಜಾಗದ ಮೇಲೆ ಇಟ್ಟು ಸವರುತ್ತಾ ಇದ್ದರೆ ನೋವು ಕಡಿಮೆಂತಾಗುತ್ತದೆ.

ಔಷಧಿ

ಉಬ್ಬಸ : ಔಷಧಿ : ಒಂದು ಹಿಡಿ ಜಗಟಿಂತು ಎಳೆ ಎಲೆಗಳನ್ನು ಮತ್ತು ಬೀಜವನ್ನು ದಿನಾಲ್ಗಿ ಜಜ್ಜಿ ಒಂದು ಪಾವು ಜೀನು ತುಪ್ಪದಲ್ಲಿ ಬೆರೆಸಿ ದಿನಕ್ಕೆ ಎರಡು ಬಾರಿ ಒಂದು ವಾರ ತೆಗೆದುಕೊಂಡರೆ ಉಬ್ಬಸ ನಿವಾರಣೆಯಾಗುತ್ತದೆ.

ಅರ್ಧತಲೆನೋವು : ಜಗಟಿಂತು ಬೀಜವನ್ನು ಅನ್ನದ ಗಂಜಿ ನೀರಿನಲ್ಲಿ ಅರೆದು ಹಣೆಗೆ ಹಚ್ಚಿದರೆ ಅರ್ಧ ತಲೆನೋವು ಗುಣವಾಗುವುದು.

ರಕ್ತಭೇದಿ : ಒಂದು ಪಾವು ಜಗಟಿಂತು ಎಲೆಂತು ರಸಕ್ಕೆ ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪು ನೀರಿಸಿ ಕೊಟ್ಟರೆ ರಕ್ತಭೇದಿ ವಾಸಿಯಾಗುವುದು.

ಹುಳಕಡ್ಡಿ : ನಿಂಬೆರಸ ಮತ್ತು ಜಗಟಿ ನೆಂಪಿನ ರಸ ಸಮ ಪ್ರಮಾಣದಲ್ಲಿ ಬೆರೆಸಿ ಹುಳಕಡ್ಡಿಗೆ ಹಚ್ಚುತ್ತಾ ಬಂದರೆ ಹುಳಕಡ್ಡಿಯಂತು ನಾಶವಾಗುತ್ತದೆ.

ಕಾಲಲ್ಲಿ ಆಣಿ : ಅಂಗಾಲಿನಲ್ಲಿ ಆಣಿ ಆದರೆ ಕಾಲನ್ನು ದಿನಾಲ್ಗಿ ತೊಳೆದು ಜಗಟಿ ನೆಂಪಿನ್ನು ಅರೆದು ಬಾಳೆ ಎಲೆಯಂತಲ್ಲಿ ರಾತ್ರಿ ಕಟ್ಟಿ ಬೆಳಿಗ್ಗೆ ಬಿಚ್ಚಬೇಕು. ಈ ರೀತಿ ಒಂದು ತಿಂಗಳಾದರೂ ಮಾಡಬೇಕು.

ಗಂಡು ಮಕ್ಕಳ ಜನನಾಂಗ ತೊಂದರೆ : ಗಂಡು ಮಕ್ಕಳಿಗೆ ಜನನಾಂಗ (ಬೀಜ) ಊದಿಕೊಂಡಿದ್ದರೆ ಜಗಟಿಂತು ಬೇರನ್ನು ನಿಂಬೆರಸದಲ್ಲಿ ತೇದು ಊದಿಕೊಂಡ ಜಾಗಕ್ಕೆ ಹಚ್ಚಬೇಕು. ಹೊಟ್ಟೆಗೂ ಕುಡಿಸಬೇಕು.

ಗಜರಿ ಗಿಡ (ಉಳ್ಳದ ಗಿಡ) / ಆಕಾಸಿಯ

Herpes

ಸರ್ಪಸುತ್ತು ಚಿಕಿತ್ಸೆ: ಒಂದು ಹಿಡಿ ಗಜರಿ ಎಲೆಗೆ ಸ್ವಲ್ಪ (ಚಿಟಿಕೆ) ಗಂಧವನ್ನು ಬೆರೆಸಿ ಒಂದು ನಿಂಬೆ ಹಣ್ಣಿನ ರಸ ತೆಗೆದು ಬೆರೆಸಿ ಬೆನ್ನಾಗಿ ಅರೆದು ಬೆಳಿಗ್ಗೆ ಸಾಯಂಕಾಲ ಬೆನ್ನಾಗಿ ಲೇಪಿಸಬೇಕು. ನಂಜಿನ ಪದಾರ್ಥಗಳನ್ನು (ಬದನೆಕಾಯಿ, ಕುಂಬಳಕಾಯಿ ಇತ್ಯಾದಿ) ಈ ಸಮಯದಲ್ಲಿ ತಿನ್ನಬಾರದು. ಹೀಗೆ ಒಂದು ವಾರ ಮಾಡುತ್ತಾ ಹೋದರೆ ಸರ್ಪಸುತ್ತು ಗುಣವಾಗುತ್ತದೆ. ಆಸ್ಪತ್ರೆಯಂತ ಔಷಧಿಯಿಂತ ಜೀವಿತಕ್ಕೇ ಈ ಔಷಧಿ ಮಾಡುವುದುಉತ್ತಮ.

Ringworm

ಹುಳಕಡ್ಡಿ: ಒಂದು ಹಿಡಿ ಗಜರಿ ಎಲೆ, ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪನ್ನು ಒಂದು ಹಳಕ ಬೆಳ್ಳುಳ್ಳಿ ಜೀವಿತ ಅರೆದು ಹುಳಕಡ್ಡಿ ಇರುವ ಜಾಗಕ್ಕೆ ಬೆನ್ನಾಗಿ ಲೇಪಿಸಬೇಕು. ಹೊಟ್ಟೆಯ ಹುಳು ಇದ್ದರೆ ಈ ಔಷಧಿ ಗುದಂತ್ರಾಗಕ್ಕೆ ಬರುವುದಿಲ್ಲ ಆದ್ದರಿಂದ ಹೊಟ್ಟೆಯ ಹುಳು ಇದ್ದರೆ ಮೊದಲು ಆದಕ್ಕೆ ಔಷಧಿ ತೆಗೆದುಕೊಂಡು ಸ್ವಲ್ಪ ಕಾಲದ ನಂತರ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕು. ಒಂದು ವಾರ ಈ ಚಿಕಿತ್ಸೆ ಬೇಕು.

ಅಲರ್ಜಿ: ಒಂದು ಹಿಡಿ ಗಜರಿ ಎಲೆಯನ್ನು ಜಜ್ಜಿ ರಸ ತೆಗೆದು ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪು ಹಾಕಿ ಕಲೆಸಿ ಅಲರ್ಜಿ ಇರುವ ಜಾಗಕ್ಕೆ ಬೆನ್ನಾಗಿ ಉಜ್ಜಬೇಕು. ಒಂದೆರಡು ದಿನ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕು.

ಕಜ್ಜಿ: ಚಿಕಿತ್ಸೆ: ಒಂದು ಹಿಡಿ ಸೊಪ್ಪನ್ನು ಒಂದು ತುಂಡು ಅರಿಶಿನ ಕೊಂಬಿನ ಜೀವಿತ ಬೆನ್ನಾಗಿ ಅರೆದು ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪು ಬೆರೆಸಿ ಕಜ್ಜಿ ಇರುವ ಜಾಗವನ್ನು ಬೆನ್ನಾಗಿ ತೊಳೆದು ಹಚ್ಚಬೇಕು. ನಾಲ್ಕು ದಿನ ಹೀಗೆ ಮಾಡಿದರೆ ಕಜ್ಜಿ ಗುಣವಾಗುತ್ತದೆ.

ಕುಷ್ಠ ರೋಗ

ಅಲರ್ಜಿ : ಚಿಕಿತ್ಸೆ : ಯಾವುದೇ ರೀತಿಯ ಅಲರ್ಜಿಯಾಗಿದ್ದರೆ ಒಂದು ಹಿಡಿ ಕುಪ್ಪಿ ಗಿಡದ ಎಲೆಗೆ ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪನ್ನು ಹಾಕಿ ಜೆನ್ನಾಗಿ ಅರೆದು ಅಲರ್ಜಿ ಇರುವ ಜಾಗಕ್ಕೆ ಉಜ್ಜಿ ಹಚ್ಚಬೇಕು. ದಿನದಲ್ಲಿ ಮುಖಾರುಸಲ ಹೀಗೆ ಮಾಡುವುದರಿಂದ ಅಲರ್ಜಿ ಮಾಯವಾಗುತ್ತದೆ.

ಶೀತ : ಮಳೆಗಾಲದ ಮುಖಾಲಕ ಒಂದೆರಡು ತೊಟ್ಟು ಕುಪ್ಪಿ ಗಿಡದ ಎಲೆಯ ರಸವನ್ನು ಒಂದೆರಡು ಹೊತ್ತು ಬಿಟ್ಟರೆ ಶೀತ ಹೆಸರಿಲ್ಲದಂತೆ ಹೋಗಿ ಬಿಡುತ್ತದೆ.

ಹುಳಕಡ್ಡಿ : ಒಂದು ಹಿಡಿ ಕುಪ್ಪಿ ಗಿಡದ ಎಲೆಯನ್ನು ತೆಗೆದುಕೊಂಡು ಎರಡು ಹಳಕು ಬೆಳ್ಳುಳ್ಳಿ ಜೊತೆ ಜೆನ್ನಾಗಿ ಅರೆದು ಹುಳಕಡ್ಡಿ ಇರುವ ಜಾಗಕ್ಕೆ ಹಚ್ಚಬೇಕು. ಒಂದು ವಾರ ಹೀಗೆ ಮಾಡುತ್ತಾ ಬಂದರೆ ಹುಳಕಡ್ಡಿ ಮಾಸಿಯಾಗುತ್ತದೆ.

ಬಜೆ

ತೊದಲು, ಧ್ವನಿ ತೊಂದರೆ: ಚಿಕಿತ್ಸೆ: ಮಕ್ಕಳಲ್ಲಿ ತೊದಲು ಇದ್ದರೆ, ಜೊಲ್ಲು ಸುರಿಯುತ್ತಿದ್ದರೆ ಧ್ವನಿ ತೊಂದರೆ ಇದ್ದರೆ ಬಜೆ(ಬೇರು) ಯನ್ನು ತುಂಡರಿಸಿದನ್ನು ಪದೇ ಪದೇ ಕಚ್ಚಿಸುತ್ತಿರಬೇಕು. ಮಕ್ಕಳು ಕಡ್ಡಲು ಒಪ್ಪದಿದ್ದರೆ ಹಾಲಿನಲ್ಲಿ ತೇದು ನಾಲಿಗೆ ಅಥವಾ ವಸಡಿಗೆ ಲೇಪನ ಹಚ್ಚಬೇಕು. ಪದೇ ಪದೇ ಹೀಗೆ ಮಾಡುವುದರಿಂದ ಜೊಲ್ಲು ಸುರಿಯುವುದು ನಿಂತು, ತೊದಲು ಹೋಗಿ ಧ್ವನಿ ಸ್ಪಷ್ಟವಾಗುತ್ತದೆ.

ವಾಂತಿ-ಭೇದಿ: ಒಂದು ತುಂಡು ಬಜೆ (ಬೇರು) ಸುಟ್ಟು ಭಸ್ಮ ಮಾಡಿ, ಅದನ್ನು ಮಜ್ಜಿಗೆಯಲ್ಲಿ ನೇರಿಸಿ ಕೊಟ್ಟರೆ ವಾಂತಿ-ಭೇದಿ ನಿಲ್ಲುತ್ತದೆ. ಇದನ್ನು ದಿನಕ್ಕೆ ಎರಡು-ಮೂರು ಬಾರಿ ಮಾಡಬೇಕು.

ವಾಂತಿಯನ್ನು ಬಿ.

ಬಜೆಯನ್ನು ಅತಿಸಾರವಾಗಿ ಹೊಟ್ಟೆಗೆ ಪ್ರಾಮುಖ್ಯವಾಗಿ ತಲೆಗೂದಲಿನ ಬೆಳವಣಿಗೆ ಹೆಚ್ಚಿಸಲು ಕಡಿಮೆ ಪ್ರಮಾಣದಲ್ಲಿ ಹೊರಬಳಕೆ.

ಮೂವು

Eczema

ಇಸಬು, ಹುಳಕಡ್ಡಿ:ಚಿಕಿತ್ಸೆ: ಮೂಲಿನ ಕಾಂಡ ಕಿತ್ತಾಗ ಒಸರುವ ಸೊಪ್ಪಾನೆಂಟನ್ನು ಹುಳಕಡ್ಡಿಗೆ, ಇಸುಬಿಗೆ ಹಚ್ಚುತ್ತಾ ಬಂದರೆ ವಾಸಿಯಾಗುತ್ತದೆ.

ಜಂತುಹುಳು: ಮೂಲಿನ ಬೀಜವನ್ನು ನುಣ್ಣಗೆ ಅರೆದು ಗೋಲಿ ಗಾತ್ರದ ಉಂಡೆಗಳನ್ನು ದಿನಕ್ಕೆ ಎರಡು ಬಾರಿ ನಾಲ್ಕು-ಐದು ದಿನ ಸೇವಿಸಿದರೆ ಜಂತು ಹುಳು ಬಿದ್ದು ಹೋಗುತ್ತದೆ.

Blood & Mucous Dysentry

ಆಮಶಂಕೆ: ಒಂದು ಹಿಡಿ ಮೂಲಿನ ಬಿಗುರೆಲೆಗಳನ್ನು ಕಷಾಯ ಮಾಡಿ ದಿನಕ್ಕೆ ಎರಡು ಮೂರು ಬಾರಿ ತೆಗೆದುಕೊಂಡರೆ ಭೇದಿ ವಾಸಿಯಾಗುತ್ತದೆ.

ಅತಿಸಾರ: ಒಂದು ಹಿಡಿ ಮೂಲಿನ ಹೂವನ್ನು ನುಣ್ಣಗೆ ಅರೆದು ಒಂದು ಲೋಟ ನೀರಿನಲ್ಲಿ ಕದಡಿ ದಿನಕ್ಕೆ ಮೂರು ಸಲ ಕುಡಿದರೆ ಅತಿಸಾರ ನಿಲ್ಲುತ್ತದೆ.

ನೆಲ್ಲಿಕಾಯಿ

ಬಿಳಿ ನೆರಗು: ಬರಿತ ಬಿಟ್ಟದ ನೆರ್ಲಿ ಕಾಯಿಗಳನ್ನು ಶುಭ್ರವಾಗಿ ಒರೆಸಿ ಜೇನುತುಪ್ಪದಲ್ಲಿ ಮುಳುಗಿಸಿಡಬೇಕು. ಸುಮಾರು ಒಂದು ವರ್ಷ ದವರೆಗೂ ಹೀಗೆ ನೆನಸಿಡಬಹುದು. ಹೀಗೆ ನೆನೆಸಿಟ್ಟ ನೆರ್ಲಿ ಕಾಯಿಯಿಂದನ್ನು ಎರಡು ದಿನ ಒಂದಿಷ್ಟಾಂದರಂತೆ ಬಿಳಿಗೆ ತಿಗೆದುಕೊಂಡರೆ ಬಿಳಿ ನೆರಗು ಸುಲಭವಾಗಿ ವಾಸಿಯಾಗುತ್ತದೆ.

ತಲೆಸುರಿ: ಒಣಗಿಸಿಟ್ಟ ನೆರ್ಲಿಕಾಯಿಯಿಂದನ್ನು ಹಸೀ ಹಾಲಿನಲ್ಲಿ ನೆನಸಿ ಅರೆದು ತಲೆಗೆ ಹಚ್ಚಿಕೊಂಡರೆ ತಲೆ ಸುರಿ ಹೋಗುತ್ತದೆ. ಕೂದಲು ಉದುರುವುದು ನಿಲ್ಲುತ್ತದೆ.

ರಕ್ತ ಹೀನತೆ: ನೆರ್ಲಿಕಾಯಿಯಿಂದನ್ನು ದಿನಾಲಿಗೆ ಅರೆದು ಜೇನುತುಪ್ಪದಲ್ಲಿ ಬೆರೆಸಿ ಕಲಸ್ಸಿನಕ್ಕರೆ ಬೆರೆಸಿ ಲೇಹ್ಯ ಮಾಡಿ ದಿನಾ ಒಂದಿಷ್ಟಾಂದು ಗೋದಿ ಗಾತ್ರದಲ್ಲಿ ತಿಂದರೆ ರಕ್ತ ಹೀನತೆ ಹೋಗುತ್ತದೆ.

ವಿಟದಿನೆ 'ಎ' ಕೊರತೆ ಇರುವವರು ದಿನಕ್ಕೆ ಎರಡು ನೆರ್ಲಿಕಾಯಿ ತಿನ್ನುತ್ತಾ ಹೋದರೆ 'ಎ' ಆನಾವಂಗದ ಕೊರತೆ ಸಂಪೂರ್ಣ ಹೋಗುತ್ತದೆ.

ಸೂಚನೆ: ಉಪ್ಪಿನಕಾಯಿ ಅಲ್ಲದೇ ಯಾವುದೇ ತಿನಿಸು ಮಾಡುವಾಗ ನೆರ್ಲಿಕಾಯಿಯಿಂದನ್ನು ಬೇಯಿಸಬಾರದು. ಬೇಯಿಸಿದರೆ ಅದರ ಸತ್ವಗಳು ನಾಶವಾಗುತ್ತದೆ.

ಸೀಬೆ

ಅಜೀರ್ಣ : ಚಿಕಿತ್ಸೆ : ಸೀಬೆಯಿಂದ ಬಿಗುರೆರೆಗಳನ್ನು ತೆಗೆದುಕೊಂಡು ಬೂದಿಯಲ್ಲಿ ಬಿಸಿ ಮಾಡಿ ಒಂದು ಪಾವು ಕರಿ ಜೀರಿಗೆಯಷ್ಟು ಜೀತೆ ಮೊಸರಿನಲ್ಲಿ ಅರೆದು ಬಾಲಿ ಹೊತ್ತಿಗೆ ಕುಡಿಯುವುದು.

ರಕ್ತಭೇದಿ : ಒಂದು ಹಿಡಿ ಸೀಬೆಯಿಂದ ಬಿಗುರೆರೆಗಳನ್ನು ತೆಗೆದು ಉಪಯೋಗಿಸಿಕೊಂಡು ಒಂದು ಪಾವು ಕರಿಜೀರಿಗೆ ಜೀತೆ ಮೊಸರಿನಲ್ಲಿ ಅರೆದು ದಿನಕ್ಕೆ ಮೂರು ಬಾರಿಯಂತೆ ತೆಗೆದುಕೊಳ್ಳಬೇಕು.

ನುಗ್ಗೆ

ರಾತ್ರಿ ಕುರುಡು: **ಚಿಕಿತ್ಸೆ:** ಎರಡು ಹಿಡಿ ನುಗ್ಗೆ ಸೊಪ್ಪಿನ ಜೊತೆ ಸ್ವಲ್ಪ ಬೇಳೆ ಒಂದು ಕಾಳುರೆಬ್ಬು, ಸ್ವಲ್ಪ ರಾಗಿ, ಒಂದು ಬೂರು ಬೆಲ್ಲ ಹಾಕಿ ದೆನಾಲ್ಗಿ ಬೇಂಯಿಸಿ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಹದಿನೈದು ದಿನ ಬಿಡದೆ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಿದರೆ ರಾತ್ರಿ ಕುರುಡು ಖಂಡಿತಾ ಹೋಗುತ್ತದೆ.

ಮುಖಾಲವಾತ: ಒಂದು ಹಿಡಿ ನುಗ್ಗೆ ಸೊಪ್ಪನ್ನು ಒಂದು ಪಾವು ಎಕ್ಕದ ಹಾಲಿನ ಜೊತೆ ದೆನಾಲ್ಗಿ ಅರೆದು ಜೇನುತುಪ್ಪ ಬೆರೆಸಿ ರಾತ್ರಿ ಹೊತ್ತು ಹಚ್ಚುತ್ತಾ ಬಂದರೆ ಮುಖಾಲವಾತ ಮೊಳಕೆ ನಶಿಸಿ ಹೋಗುತ್ತದೆ.

ನುಗ್ಗೆಗಿಂತಲೂ ದಿವ್ಯವಿನೆ–ಎ ಅಂಶ ತುಂಬಾ ಇರುವುದರಿಂದ ಗರ್ಭಿಣಿ ಹೆಂಗಸರು, ನಿಶಕ್ತಿ ಇರುವವರು ಹೆಚ್ಚಾಗಿ ಸೇವಿಸಿದರೆ ಒಳ್ಳೆಯದು.

ನೆಲ ನಲ್ಲೂರಿ (ಕಿಳಾನಲ್ಲಿ)

ಕಾವಮಾರಿ:ಚಿಕಿತ್ಸೆ: ಒಂದು ಹಿಡಿ ನೆಲ ನಲಾ್ಲರಿ ಸೊಪ್ಪಿಗೆ ಒಂದು ತುಂಡು ಅರಿಶಿನ ಹಾಕಿ ಜೆನಾ್ನಗಿ ಅರೆದು ಎಂಡೆ ಮಾಡಿ ಗೋ್ಲರಿ ಗಾತ್ರದ ಈ ಗುಂಡಿಗಳನು್ನ ದಿನಕೆ್ಕ ಮುಾರು ಬಾರಿ(ಬೆಳಿಗೆ್ಗ, ಮಧ್ಯಾಹ್ನ, ಸಾಂತುಂಕಾಲ) ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ನಾಲು್ಕ ದಿನದ ಇಂತಹ ಚಿಕಿತ್ಸೆ ಯಿಂದ ಕಾವಮಾರಿ ವಾಸಿಂತಾಗುತ್ತದೆ.

ಒಂದು ಹಿಡಿ ನೆಲ ನಲಾ್ಲರಿಂತುನು್ನ ಜೆನಾ್ನಗಿ ಜಜ್ಜಿ ಒಂದು ಲೋಟ ಮಜ್ಜಿಗೆಂತುರಿ್ಲ ಕದಡಿ ಕುಡಿಂತುಬೇಕು. ದಿನಕೆ್ಕ ಮುಾರು ಬಾರಿ ನಾಲು್ಕ ದಿನ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡಬೇಕು.

ರೋಗ ಲಕ್ಷಣಗಳು

ಪಿತ್ತ: ತಲೆ ಸುತ್ತುತ್ತದೆ. ಅಜೀರ್ಣವಾಗುತ್ತದೆ. ವಾಂತಿ ಯಾಗುತ್ತದೆ. ವಾಂತಿ ಕಹಿಯಾಗಿ, ರೋಳೆಯಾಗಿರುತ್ತದೆ.

ರಕ್ತ ಪಿತ್ತ: ತಲೆ ಸುತ್ತುತ್ತದೆ. ವಾಂತಿಯಾಗುತ್ತದೆ. ವಾಂತಿ ರೋಳೆಯಾಗಿದು ರಕ್ತ ಬೀಳುತ್ತದೆ. ಬಿಸಿಲು ಕಾಲದಲ್ಲಿ ಮೂಗು ಒಡೆದು ರಕ್ತ ಬರುತ್ತದೆ.

ಗುರಿ ಮೂತ್ರ: ಪದೇ ಪದೇ (ಗಂಟೆಗೆ 15–20 ಸಲ) ಮೂತ್ರಕ್ಕೆ ಹೋಗುವಂತಾಗುತ್ತದೆ. ಒಂದು ತೊಟ್ಟು ಎರಡು ತೊಟ್ಟು ಮೂತ್ರ ಮೂತ್ರ ಹೋಗುತ್ತದೆ. ಮೂತ್ರಕ್ಕೆ ಹೋಗುವಾಗ ತುಂಬಾ ಉರಿಯಾಗಿ ಪುಡುಪುವಂತೆ ಆಗುತ್ತದೆ. ಯಾವುದೇ ಚಿಕಿತ್ಸೆ ತೆಗೆದುಕೊಳ್ಳದೇ ಹೋದರೆ ಕೊನೆ ಕೊನೆಗೆ ರಕ್ತ ಹೋಗಲು ಪ್ರಾರಂಭವಾಗುತ್ತದೆ.

ಹುಳಕಡಿ: ಇದು ಕಾಲು–ಕೈ, ದಿನುಗಳಲ್ಲಿ ಕಂಡುಬರುತ್ತದೆ. ಇದಕ್ಕೆ ಮುಖ್ಯ ಕಾರಣ ಹೊಟ್ಟೆಯಂತರಲ್ಲಿ ಹುಳ ಇರುವುದು. ಸಣ್ಣ–ಸಣ್ಣ ಗುಳ್ಳೆಗಳು ದುಂಡಗೆ ಉಂಗುರದಂತೆ ಕಾಣಿಸಿಕೊಳ್ಳುತ್ತವೆ. ತುಂಬಾ ತುರಿಕೆಯಾಗುತ್ತದೆ.

ಬಿಳಿಸೆರಗು: (ಬಿಳುಪು ಹೋಗುವುದು): ಇದು ಮಹಿಳೆಯರಲ್ಲಿ ಕಂಡು ಬರುವ ರೋಗ, ನಾವು ಬಿಳಿ ಕಂಡದೆಲ್ಲಾ ಬಿಳಿಸೆರಗು ಎಂದು ಕೊರಗುತ್ತೇವೆ. ಆದರೆ ಬಿಳಿಯಾಗಿ ಹೋಗುವುದೆಲ್ಲಾ ಬಿಳಿಸೆರಗು ಅಲ್ಲ. ರೋಳೆಯಾಗಿ ಹೋಗುವದು ಬಿಳಿಸೆರಗಲ್ಲ. ಅದು ಅರೋಗ್ಯದ ಲಕ್ಷಣ. ಬಿಳಿಸೆರಗು ಮಜ್ಜಿಗೆಯಂತು ಹಾಗೆ ಬೆಳ್ಳಗೆ ತೆಳುವಾಗಿ ಹೋಗುತ್ತದೆ. ರೋಳೆ ಇರುವುದಿಲ್ಲ. ಕೆಟ್ಟವಾಸನೆ ಇರುತ್ತದೆ.

ಕಣ್ಣಾಬ್ಬಿ: ಸಾಧಾರಣ ಬೇಸಿಗೆಯಂತರಲ್ಲಿ ಹರಡುವಂತಹ ಅಂಟುರೋಗ. ಕಣ್ಣಿ ಕೆಂಪಗಾಗಿ ನೀರು ಸುರಿಯುತ್ತಿರುತ್ತದೆ. ಯಾವಾಗಲೂ ಪಿಸರೆ ಬರುತ್ತಲೇ ಇರುತ್ತದೆ.

ರೋಗ ಲಕ್ಷಣಗಳು

ಕುಷ್ಠರೋಗ: ದೇಹದ ಮೇಲೆ ಅಲ್ಲಲ್ಲಿ ಮಚ್ಚೆಯಂತಹ ಆಕಾರಗಳು ಕಾಣಿಸಿಕೊಳ್ಳುತ್ತವೆ. ಇದನ್ನು ಸೂಜಿಯಿಂದಲ್ಲಿ ಚುಚ್ಚಿದರೂ ನೋವಾಗುವುದಿಲ್ಲ. ನಿರ್ಜೀವವಾಗಿರುತ್ತದೆ. ಕ್ರಮೇಣ ಬೆರಳುಗಳು, ಮುಖ, ಕಾಲು ಇತ್ಯಾದಿಗಳು ರೋಗ ಹಿಡಿದು ಕರಗುತ್ತಾ ಹೋಗಿ ಅಂಗವಿಕಲತೆ ಉಂಟಾಗುತ್ತದೆ.

ಮೂಲವ್ಯಾಧಿ: ಪ್ರಾರಂಭದಲ್ಲಿ ಮಲಬದ್ಧತೆ(ಕಕ್ಕಸಿಗೆ ಹೋಗುವಾಗ ಕಷ್ಟವಾಗುವುದು) ಮತ್ತು ಮಲದಲ್ಲಿ ರಕ್ತ ಹೋಗುವುದು ಉಂಟಾಗುತ್ತದೆ. ಕ್ರಮೇಣ ಮಲದ್ವಾರ (ಕಕ್ಕಸು ಮಾಡುವ ಜಾಗ) ದಲ್ಲಿ ವೊಳಕೆಯೊಂದು ಕಾಣಿಸಿಕೊಳ್ಳುತ್ತದೆ. ಇದು ಕೈಗೆ ಕಾಡ ಸಿಗುತ್ತದೆ.

ಸಿಹಿ-ಮೂತ್ರ ರೋಗ: ತುಂಬಾ ನುಸ್ಸಾಗುತ್ತದೆ. ತಲೆ ಸುತ್ತು ಬರುತ್ತದೆ. ಪದೇ ಪದೇ ಮೂತ್ರ ಮಾಡಬೇಕೆನಿಸುತ್ತದೆ. ಕಾಲಲ್ಲಿ ಉಗಾತ ಬರುತ್ತದೆ. ಬಿಕ್ಕ ಗಾಂತು ಕಾಡ ವಾಸಿಯಾಗದೇ ಉಳಿಯುತ್ತದೆ.

ರೋಗ ಕಂಡು ಹಿಡಿಯುವುದು: ರಾತ್ರಿ ಒಂದು ಬಟ್ಟಲಿನಲ್ಲಿ ಮೂತ್ರ ಮಾಡಿ ಇಟ್ಟು, ಬೆಳಿಗೆ ಎದ್ದು ನೋಡುವಾಗ ಅದರ ತಳಭಾಗದಲ್ಲಿ ಬಿಳಿಯು ಬಣ್ಣದ ಪುಡಿಯಂತಹದ್ದು ಸಂಗ್ರಹವಾಗಿರುತ್ತದೆ.

ಅರ್ಧ ತಲೆ ನೋವು: ತಲೆಯ ಒಂದೇ ಭಾಗದಲ್ಲಿ ತುಂಬಾ ನೋವಿರುತ್ತದೆ. ಒಮ್ಮೊಮ್ಮೆ ಒಂದು ಕಡೆಯಿಂದ ಮತೊಂದು ಕಡೆಗೆ ರವಾನೆಯಾಗುತ್ತದೆ.

ಆನೆ ಕಾಲು ರೋಗ: ಕಾಲು ಕೆಳಗಡೆಯಿಂದ ದಪ್ಪ ಆಗುತ್ತಾ ಹೋಗಿ ಕೊನೆಗೆ ಇಡೀ ಕಾಲು 'ಆನೆಯ ಕಾಲಿ' ನ ತರಹ ದಪ್ಪ ಆಗುತ್ತದೆ. ಗಂಡಸರಿಗೆ ಶಿಶ್ನ ಕಾಡ ಈ ಕಾಯಿಲೆಗೆ ತುತ್ತಾಗುತ್ತದೆ. ಮಹಿಳೆಯರ ಸ್ತನಕ್ಕೆ ಇದು ತಗಲುವುದುಂಟು.

ರೋಗ ಲಕ್ಷಣಗಳು

ರಕ್ತಹೀನತೆ: ಮುಖವು ಬಿಳಿಚಿಕೊಂಡಿರುತ್ತದೆ. ಕಣ್ಣು ಬಿಡಿಸಿ ನೋಡಿದಾಗ ಬಿಳಿಚಿಕೊಂಡಿರುತ್ತದೆ. ನಾಲಿಗೆಯೂ ಬಿಳಿಚಿಕೊಂಡಿರುತ್ತದೆ ತುಂಬಾ ನೆಗಡಿ ನೆಗಡಿ ಇದ್ದು ವಿಪರೀತ ಆಯಾಸವಾಗುತ್ತದೆ. ಸ್ವಲ್ಪ ನಡೆದರೂ ಸುಸ್ತಾಗುತ್ತದೆ. ಮಗುವು ಬಿಳಿಚಿಕೊಂಡು ಬಿಪ್ಪೆದ್ದು ಬರುತ್ತದೆ.

ಕರುಳು ಬೇನೆ: ಹೊಕ್ಕುಬೇರಿ ದಢಾರ ಎಳುವಂತೆ ಹೊಟ್ಟೆಯಿಂದ ಒಳಗೆ ಎದ್ದಿರುತ್ತದೆ. ಆಗ ಹೊಟ್ಟೆ ನೋವು ಇರುತ್ತದೆ. ಹಾಗೆ ಬೇರೆ ರೀತಿಯ ಹುಣ್ಣುಗಳು ಆದಾಗಲೂ ಹೊಟ್ಟೆನೋವು ಬರುತ್ತದೆ. ಔಷದಿ ಬಳಕೆಯ ನಂತರವೂ ಕಡಿಮೆಯಾಗದಿದ್ದರೆ ಅಲ್ಸರೇಶನ್, ಕ್ಯಾನ್ಸರೇ ಬೇರೆ ಏನಾದರೂ ಗಡ್ಡೆ ಬೆಳೆದಿರಲು ಸಾಧ್ಯ. ಡಾಕ್ಟರಲ್ಲಿ ತೋರಿಸಿ.

Intestinic colic (pain)

ಅಲರ್ಜಿ: ಇದರಲ್ಲಿ ತುಂಬಾ ರೀತಿ ಇದೆ. ಒಬ್ಬೊಬ್ಬರಿಗೆ ಒಂದೊಂದು ಅಲರ್ಜಿಯಾಗಬಹುದು. ಯಾವುದಾದರೂ ಒಂದು ಆಹಾರ ಸರಿಹೋಗದಿದ್ದರೆ, ದೂಳು ಎದ್ದರೆ, ಹೊಗೆಯಾದರೆ ಹೀಗೆ ಬೇರೆ ಬೇರೆ ಕಾರಣಗಳಿಗೆ ಉಂಟಾಗುತ್ತದೆ. ಕೆಲವರಿಗೆ ಗೇರು ಮರದ ಕೆಳಗೆ ಹೋದರೇ ಅಲರ್ಜಿಯಾಗುತ್ತದೆ. ಅಲರ್ಜಿಯೆಂದರೆ ಮೈಯೆಲ್ಲಾ ಕಡಿತದಂತೆ ಪ್ರಾರಂಭವಾಗಿ ಕೆಂಪು ಗಂದಿಯಾಗುವುದು. ಕೆಲವರಿಗೆ ಗಾಯವು ಆಗುವುದು ಉಂಟು. ಯಾವ ಪದಾರ್ಥದಿಂದಲಾದರೂ ಇದು ಆಗಬಹುದು. ಯಾವ ಪದಾರ್ಥ, ವಾತಾವರಣ ನಮ್ಮ ಶರೀರಕ್ಕೆ ಒಗ್ಗುವುದಿಲ್ಲವೋ ಅಂತಹದರಿಂದ ಏನು

ತೊಂದರೆಯಾದರೂ ಆಗಬಹುದು. ನಮ್ಮ ಶರೀರಕ್ಕೆ ಅಲ್ಲಾರ್ಜಿಸದಿಲ್ಲದಿರುವುದು, ಒಗ್ಗದಿರುವುದೇ ಅಲರ್ಜಿ.

ದತ್ತೂರಿ

ಗದಕಟ್ಟು: ಒಂದು ಹಿಡಿ ದತ್ತೂರಿ ಎಲೆಯನ್ನು ಗಂಧ ಮತ್ತು ನಿಂಬೆರಸದ ಜೊತೆಗೆ ಬೆನ್ನಿಗೆ ಅರೆದು ಲೇಪನ ಹಾಕಬೇಕು. ನಾಲ್ಕು ದಿನ ಹೀಗೆ ಮಾಡಿದರೆ ಗದಕಟ್ಟು ವಾಸಿಯಾಗುತ್ತದೆ.

ಪರ್ಮವಾಕ್ಧಿ: ಯಾವುದೇ ತರದ ಪರ್ಮವಾಕ್ಧಿಗೆ, ಮೇಲಿನ ರೀತಿಯಲ್ಲಿಯೇ ಲೇಪನ ತಯಾರಿಸಿ ಬೆನ್ನಿಗೆ ಹಚ್ಚಬೇಕು. ವಾಸಿಯಾಗುವ ತನಕ ಹಚ್ಚುತ್ತಾ ಬನ್ನಿ.

ಅಸ್ತಮಾ: ದತ್ತೂರಿಯಿಂದ ಹೂವು, ಬಿತ ಎಲೆಗಳನ್ನು ನೆರಳಿನಲ್ಲಿ ಒಣಗಿಸಿ ಪುಡಿ ಮಾಡಿ ಬೀಡಿ ಕಟ್ಟಿ ಸೇದುತ್ತಾ ಹೊಗೆಯನ್ನು ಒಳಗಡೆ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ದಿನಕ್ಕೆ ಕಡೆಪಕ್ಷ ನಾಲ್ಕು ಬೀಡಿಯನ್ನಾದರೂ ಸೇದಬೇಕು. ನಾಲ್ಕು ದಿನ ಹೀಗೆ ಮಾಡಿದರೆ ಅಸ್ತಮಾ ದಮ್ಮಿನ ಗುಣ ಕಾಣುತ್ತದೆ.

ಸೂಚನೆ: ದತ್ತೂರಿ ಬೀಜ ವಿಷಯುಕ್ತ. ಔಷಧಿಯನ್ನು ಆದರ ಭಯಂಕರವಾಗಿ ಮಾಡಬಾರದು.

ಕೇವಲ ನೈಸರ್ಗಿಕವಾಗಿ ಬೆಳೆದ ಮುಂಜಾನೆಯಲ್ಲಿ ಬಳಸಿ
ಎಚ್ಚರಿಕೆಯಿಂದ ನಿಭಾಯಿಸಿ

ಹೀರಳೆಕಾಯಿ

ಪಿತ್ತ, ತಲೆಸುತ್ತು: ಚಿಕಿತ್ಸೆ: ಹೀರಳೆಕಾಯಿಯಂತನನ್ನು ಹೊಳೆಯುವಂತೆ ಮಾಡಿ ಒಂದು ಜವುಜ ಜೀರಿಗೆ ಪುಡಿ, ಒಂದೆರಡು ಚಿಟಿಕೆ ಉಪ್ಪು ಹಾಕಿ ರಾತ್ರಿ ಮಲಗುವಾಗ ಮನೆಯಂತ ಡಾವಣಿಯಂತ ಮೇಲೆ (ಹೊರಗೆ ಇಡಬೇಕು. ಮಂಜಾನೆ ಹಾಸಿಗೆಯಿಂದೆದ್ದಿರುವಾಗಲೇ ಖಾಲಿ ಹೊಟ್ಟೆಗೆ ಅದನ್ನು ತಿನ್ನಬೇಕು. ಮೂರು ದಿನ ಈ ಚಿಕಿತ್ಸೆಯಿಂದ ಪಿತ್ತ, ತಲೆಸುತ್ತು ವಾಸಿಯಾಗುತ್ತದೆ.

ಅಜೀರ್ಣ: ಬೆಳಿಗ್ಗೆ ಹೀರಳೆಕಾಯಿಯಂತ ರಸ ಹಿಂಡಿ ಖಾಲಿ ಹೊಟ್ಟೆಗೆ ಕುಡಿದರೆ ಅಜೀರ್ಣ ಹೋಗುತ್ತದೆ.

ತಲೆನೋವು, ತಲೆ ಗುರಿ: ಹೀರಳೆಕಾಯಿಯಂತನನ್ನು ಬಾಡಿಸಿ(ರಾತ್ರಿ ಮಲಗುವಾಗ ಒಲೆಯಂತ ಬೆಚ್ಚಗಿನ ಬೂದಿಯಲ್ಲಿ ಮುಚ್ಚಿಟ್ಟು ಬೆಳಿಗ್ಗೆ ತೆಗೆದುಕೊಳ್ಳಬಹುದು) ಅದರ ಒಳಗಿನ ಭಾಗವನ್ನು ಬಿಸಿ ಬಿಸಿಯಾಗಿರುವಾಗಲೇ ಬಾಳೆಎಲೆಯಂತರಲ್ಲಿ ಉದ್ದುರಿಸಿ ತಲೆಗೆ ಕಟ್ಟಿಕೊಳ್ಳಬೇಕು. ಮೂರು-ನಾಲ್ಕು ಗಂಟೆ ಕಾಲ ಹೀಗೆ ಕಟ್ಟಿ ಬಿಟ್ಟು ಸ್ನಾನ ಮಾಡಬೇಕು. ಐದು ದಿನ ಹೀಗೆ ಮಾಡುವಷ್ಟರಲ್ಲಿ ಯಾವುದೇ ಬಗೆಯಂತ ತಲೆನೋವು, ತಲೆ ಗುರಿ, ಪಿತ್ತ ಮಾಯವಾಗುತ್ತದೆ.

ವೀಳೆಯದೆಲೆ

ನಾಯಿ ಕೆಮ್ಮು:ಚಿಕಿತ್ಸೆ: ಒಂದು ಟೀ ಚಮಚ ವೀಳೆಯದೆಲೆ ರಸ, ಕಾಲು ಟೀ ಚಮಚ ಬಿಳಿ ಈರುಳ್ಳಿ ರಸ ಮತ್ತು ಎರಡು ಟೀ ಚಮಚ ಜೇನುತುಪ್ಪದೊಂದಿಗೆ ಸ್ವಲ್ಪ ಇಂಗನ್ನು ತೇದು ದಿನಕ್ಕೆ ಮೂರಾವರ್ತಿ ಯೊಂದಿಗೆ ಸೇವಿಸುವುದರಿಂದ ನಾಯಿ ಕೆಮ್ಮು, ಹೊಟ್ಟೆ ಉಬ್ಬರ ಬಹಳಷ್ಟು ಸುಧಾರಣೆ ಕಂಡು ಬರುತ್ತದೆ.

ಹೊಟ್ಟೆ ಉಬ್ಬರ: ವೀಳೆದೆಲೆಯಿಂದ ಅರ್ಧ ಟೀ ಚಮಚದಷ್ಟು ಕೊತ್ತಂಬರಿ ಬೀಜದ ಪುಡಿಯನ್ನಿಟ್ಟು ಊಟವಾದ ನಂತರ ಸೇವಿಸಿದರೆ ಹೊಟ್ಟೆ ಉಬ್ಬರ ಹೋಗುತ್ತದೆ.

ತಲೆಹೊಟ್ಟು, ಕೂದಲು ಉದುರುವುದು: ವೀಳೆಯದೆಲೆಗಳನ್ನು ನುಣ್ಣಗೆ ಅರೆದು ಕೊಬ್ಬರಿ ಎಣ್ಣೆಯಲ್ಲಿ ಕಲಸಿ ತಲೆಗೆ ಹಚ್ಚುವುದರಿಂದ ತಲೆಯಲ್ಲಿ ಹೊಟ್ಟು ಸುರಿಯುವುದು ಮತ್ತು ಕೂದಲು ಉದುರುವುದು ನಿಂತು ಹೋಗುವುದು. ವಿಶ್ರಾಣವನ್ನು ತಲೆಗೆ ಹಚ್ಚಿ ಎರಡು ಗಂಟೆಗಳ ಕಾಲ ಬಿಟ್ಟು ಸೀಗೆಪುಡಿಯಿಂದ ತೊಳೆಯಬೇಕು. ಹೀಗೆ ನಾಲ್ಕು ದಿನ ಮಾಡಬೇಕು.

ತಲೆನೋವು: ವೀಳೆಯದೆಲೆಯನ್ನು ಕೆಂಡದ ಮೇಲೆ ಬಿಸಿ ಮಾಡಿ ಹಣೆಗೆ ಶಾಖ ಕೊಟ್ಟರೆ ತಲೆನೋವು ಬಿಟ್ಟು ಹೋಗುವುದು.

ಕೆಂಗಣ್ಣು: ಕಣ್ಣು ಕೆಂಪಾದರೆ ಒಂದೆರಡು ಹನಿ ವೀಳೆಯದೆಲೆ ರಸವನ್ನು ಕಣ್ಣಿಗೆ ಬಿಡಿ. ದಿನಕ್ಕೆ ಎರಡಾವರ್ತಿಯಂತೆ ಒಂದು ವಾರ ಈ ಚಿಕಿತ್ಸೆ ಮಾಡುವುದರಿಂದ ಗುಣ ಕಂಡುಬರುವುದು.

ಬೆಕ್ಕಿನ ಮುಟ್ಟು

ಮೂಲವಾಕ್ಯ: ಚಿಕಿತ್ಸೆ: ಒಂದು ಹಿಡಿ ಹುಳಿನೆಲಾಪ್ಪನ್ನು ತೆಗೆದುಕೊಂಡು, ಶುಚ್ಚಿ ಬಟ್ಟೆಯಂತೆರಿ ಒರೆಸಿ, ದಿನಾಲಿಗಿ ಜಜ್ಜಿದ ಅದು ಮುಳುಗುವಷ್ಟು ಹಸುವಿನ ತುಪ್ಪದರಿ ಹಾಕಿ ದಿನಾಲಿಗಿ ಕುದಿಸಬೇಕು. ಆ ನಂತರ ಅದನ್ನು ಸೋಸಿ ರಾತ್ರಿ ಮಲಗುವಾಗ ಹಚ್ಚಬೇಕು. ಹೀಗೆ ಹದಿನೈದು ದಿನಗಳ ಕಾಲ ಮಾಡಿದರೆ ಮೂಲವಾಕ್ಯ ಗುಣವಾಗುತ್ತದೆ. ಹಸುವಿನ ತುಪ್ಪ ಸಿಗದಿದ್ದಂ ಪಕ್ಷದರಿ ಕೈಎಣ್ಣೆ(ಹರಳೆಣ್ಣೆ)ಯನ್ನು ಉಪಯೋಗಿಸಬಹುದು.

ಫ್ರೆಂಚ್ ಭಾಷೆಯಲ್ಲಿ ಈ ಕುರಿತು ಪಠ್ಯವನ್ನು ಬರೆಯಲಾಗಿದೆ

ಬಿಳಿ ದಾಸವಾಳ

ಬಿಳಿ ಸೆರಗು:ಚಿಕಿತ್ಸೆ: ಎರಡು ಹಿಡಿ ಎಳೆ ಬಿಳಿ ದಾಸವಾಳದ ಸೊಪ್ಪು ಮತ್ತು ಎರಡು ಹಿಡಿ ಹೂ ಜೊತೆಗೆ ಒಂದೆರಡು ಚಮಚದಷ್ಟು ಅಕ್ಕಿ ತೊಳೆದು ದಿನಾಲಿಗಿ ರುಬ್ಬಬೇಕು. ಬಾರಿ ಹೊತ್ತಿಗೆ ಬೆಳಿಗ್ಗೆ ಇದರಿಂದ ದೋಸೆ ತಂತೂರಿಸಿ ತಿನ್ನಬೇಕು. ನಂತರ ಕಾಫಿ, ಟೀ ಏನೂ ತೆಗೆದು ಕೊಳ್ಳಬಾರದು. ಈ ಚಿಕಿತ್ಸೆಯಂತನನ್ನು ಒಂದು ವಾರ ಮಾಡಿದೆಂದೆ ಆದರೆ ಬಿಳಿ ಸೆರಗು ಗುಣವಾಗುತ್ತದೆ.

ತಲೆ ಸುತ್ತು: ಎರಡು ಹಿಡಿ ಬಿಳಿ ದಾಸವಾಳದ ಬಲಿತ ಎಲೆಯಂತು ಜೊತೆಗೆ ಎರಡು ಚಮಚ ಮೆಂತ್ಯ ಬೆರೆಸಿ ದಿನಾಲಿಗಿ ರುಬ್ಬಿ ಬೆಳಗಿನ ಜಾವ ತಲೆಗೆ ಕಟ್ಟಿ ಕೊಳ್ಳಬೇಕು. ಮುಂಜಾರು ಗಂಟೆಗಳ ನಂತರ ದಾಸವಾಳದ ಎಲೆಯಂತು ಲೋಳೆಯಿಂದ ತೊಳೆದು ತೆಗೆಯಂತುಬೇಕು. ಹೀಗೆ ಮುಂಜಾರು ದಿನ ಮಾಡಿದರೆ ತಲೆಸುತ್ತು ಗುಣವಾಗುವುದಲ್ಲದೆ ಕೂದಲು ಉದುರುವುದೂ ನಿಲ್ಲುತ್ತದೆ.

ಮುಟ್ಟಿನ ಸಮಸ್ಯೆ: ಒಂದೆರಡು ಹಿಡಿ ಬಿಳಿ ದಾಸವಾಳದ ಎಲೆಯಂತನನ್ನು ದಿನಾಲಿಗಿ ಜಜ್ಜಿ ಅದರ ಲೋಳೆಯಂತನನ್ನು ಹಿಂಡಿ ತೆಗೆದು ಅದರ ಜೊತೆಗೆ ಒಂದು ಚಮಚ ಕಲ್ಲುಸಕ್ಕರೆ, ಎರಡು ಚಮಚ ಕೊತ್ತಂಬರಿ ಬೀಜದ ಪುಡಿ ಒಂದು ಲೋಟ ಎಳನೀರು ಹಾಕಬೇಕು. ಈ ವಿಶ್ರಣವನ್ನು ರಾತ್ರಿ ತಂತೂರಿಸಿಟ್ಟು ಬೆಳಿಗ್ಗೆ ಬಾರಿ ಹೊತ್ತಿಗೆ ಕುಡಿಯಂತುಬೇಕು. ಹೀಗೆ ಮುಂಜಾರು ದಿನ ಮಾಡಿದರೆ ಋತು ಮುಂತ್ರ ಗುಣವಾಗುತ್ತದೆ.

ಮೊಳೆಸರ

ಕಣ್ಣಿ ಉರಿ: ರೋಳೆಸರದ ಹೊರ ಪದರವನ್ನು ತೆಗೆದು ಒಳಗಿನ ಭಾಗವನ್ನು, ಕಣ್ಣಿ ಮುಚ್ಚಿ ಕಣ್ಣಿನ ಹೊರ ಪದರದ ಮೇಲೆ ಸ್ವಲ್ಪ ಹೊತ್ತು ಇಡಬೇಕು. ಹೀಗೆ ಪದೇ ಪದೇ ಮಾಡುತ್ತಾ ಬಂದರೆ ಕಣ್ಣಿರಿ ಹೋಗುತ್ತದೆ.

ತಲೆಸುರಿ—ಕೂದಲು ಉದುರುವುದು: ಒಂದೆರಡು ರೋಳೆಸರದ ಎಸಳುಗಳನ್ನು ತೆಗೆದುಕೊಂಡು ಮೇಲ್ಪದರ ತೆಗೆದು ಹಾಕಿ ಸಣ್ಣ ಚೂರುಗಳನ್ನಾಗಿ ಮಾಡಿ ಹರಳಿನ ಎಲೆಂತರಿ ಹಾಕಿ ತಲೆಗೆ ಕಟ್ಟಿಕೊಳ್ಳಬೇಕು. ಮೂರು ಗಂಟೆಗಳ ಕಾಲ ಹೀಗೆ ಕಳೆತಿದ್ದು ನಂತರ ಮೆಂತ್ಯದ ಪುಡಿಯಿಂದ ತೊಳೆದು ಸೀಗೇಪುಡಿಯಿಂದ ತೊಳೆಯಬೇಕು. ಬೆಳಿಗಿನ ಸಮಯ ಹೀಗೆ ಮೂರು ದಿನ ಮಾಡಿದರೆ ತಲೆ ಉರಿ ಶಾಂತವಾಗಿ ಕೂದಲು ಉದುರುವುದು ನಿಲ್ಲುತ್ತದೆ.

ಅತಿ ಮುತ್ತುಸ್ರಾವ: ಒಂದು ಎಸಳು ರೋಳೆ ಸರದ ರಸ ತೆಗೆದು ಸ್ವಲ್ಪ ಕಲ್ಲು ಸಕ್ಕರೆ ಬೆರೆಸಿ ಬರೀ ಕೊಟ್ಟಿಗೆ ಕುಡಿಯಬೇಕು. ರಕ್ತಸ್ರಾವ ಇದ್ದಾಗ ಹೀಗೆ ಮಾಡುವುದರಿಂದ ಕಡಿಮೆಯಾಗುತ್ತದೆ.

ನಿತ್ಯಪುಷ್ಪ

ನಿತ್ಯ ಪುಷ್ಪದ ಚಿಕಿತ್ಸೆ: ನಿತ್ಯ ಪುಷ್ಪ ಗಿಡದ ಕಾಂಡ, ಬೇರು, ಎಲೆಗಳನ್ನು (ಒಂದು ಗಿಡದ) ದಿನಾಲಿಗಿ ತೊಳೆದು ಜಜ್ಜಿ ನಾಲ್ಕು ಲೋಟ ನೀರಿನಲ್ಲಿ ಕುದಿಸಬೇಕು. ಅದನ್ನು ಒಂದು ಲೋಟದಷ್ಟು ಬತ್ತಿಸಬೇಕು. ಇದನ್ನು ಹದಿನೈದು ದಿನಗಳ ಕಾಲ ಬೆಳಿ ಹೊಟ್ಟಿಗೆ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ಚಿಕಿತ್ಸೆ ಮಾಡುವ ಸಮಯದಲ್ಲಿ ಆಹಾರದಲ್ಲಿ ಅನ್ನಕ್ಕಿಂತ ರಾಗಿ, ಗೋಧಿ ಉಪಯೋಗಿಸಿದರೆ ಉತ್ತಮ. ಆಹಾರದಲ್ಲಿ ಸಿಹಿ ಕಡಿಮೆ ಮಾಡಬೇಕು.

ಯಾವುದೇ ವ್ಯಾಧಿಯಲ್ಲಾದರೂ ಮೂತ್ರ ಪರೀಕ್ಷೆ ಮಾಡಿಸಿ.

ನಾಗದಾಳಿ (ಹಾವು ನಂಜಿನ ಸೊಪ್ಪು, ಸದಾಪ್ರ ಸೊಪ್ಪು)

Bronchitis

ಪಕ್ಕೆ ಶೂಲೆ: ಚಿಕಿತ್ಸೆ: ಒಂದು ಚಮಚ ನಾಗದಾಳಿಯ ರಸವನ್ನು ಒಂದು ಚಮಚ ಹಸುವಿನ ಹಾಲಿನಲ್ಲಿ ಬೆರೆಸಿ ಕಾಯಿಲೆ ಬಂದ ಮಗುವಿಗೆ ಖಾಲಿ ಹೊಟ್ಟೆಗೆ ಕುಡಿಸಬೇಕು. ಹಾಲು ಕುಡಿಸುವ ತಾಯಿ ಶೀತ ಪದಾರ್ಥಗಳನ್ನು ತಿನ್ನಬಾರದು. ಹೀಗೆ ನಾಲ್ಕು ದಿನ ಮಾಡಿದರೆ ಪಕ್ಕೆ ಶೂಲೆ ವಾಸಿಯಾಗುತ್ತದೆ.

ಮಕ್ಕಳ ಕಾಯಿಲೆ: ನಾಗದಾಳಿ ಸೊಪ್ಪನ್ನು ನೆರಳಿನಲ್ಲಿ ಒಣಗಿಸಿ ಇದರ ಹೊಗೆಯನ್ನು ಕಾಯಿಲೆ ಬಂದ ಮಕ್ಕಳಿಗೆ ಕುಡಿಸಿದರೆ ಗುಣವಾಗುತ್ತದೆ.

[illegible]
[illegible]
[illegible]

ಗಾಳಿಸೊಪ್ಪು

ಮಲಬದ್ಧತೆಯ ಹೊಟ್ಟೆ ನೋವು: ಚಿಕಿತ್ಸೆ: ಒಂದು ಹಿಡಿ ಗಾಳಿಸೊಪ್ಪಿಗೆ ಒಂದು ಹಳಕು ಬೆಳ್ಳುಳ್ಳಿ ಎರಡು ಮೆಣಸಿನ ಕಾಳು, ಒಂದು ಚಿಟಿಕೆ ಉಪ್ಪು ಹಾಕಿ ದಿನಾಲ್ಕಿಗಿ ಅರೆದು ಮಲಬದ್ಧತೆ ಕಾಣಿಸಿಕೊಳ್ಳುವ ಮೊದಲೇ ಹೊಟ್ಟೆ ನೋವು ಪ್ರಾರಂಭವಾಗುವಾಗ ತೆಗೆದುಕೊಳ್ಳಬೇಕು.

ಜ್ವರ, ತಲೆನೋವು, ಮೈ-ಕೈ ನೋವು: ಒಂದೆರಡು ಹಿಡಿ ಗಾಳಿ ಸೊಪ್ಪನ್ನು ಒಂದು ಹಳಕು ಬೆಳ್ಳುಳ್ಳಿಯಂತು ಜೊತೆ ಅರೆದು ಮೈ-ಕೈಗೆಲ್ಲಾ ದಿನಾಲ್ಕಿಗಿ ಲೇಪಿಸಿದರೆ ಒಳ್ಳೆ ಬೆವರಿಳಿದು ಜ್ವರ-ತಲೆನೋವು-ಮೈ-ಕೈ ನೋವು ಹೋಗುತ್ತದೆ.

ನಂದಿ ಬಟ್ಟಲು

<u>ಕೆಂಗಣ್ಣು ಚಿಕಿತ್ಸೆ:</u> ನಂದಿಬಟ್ಟಲು ಹೂವನ್ನು ಎದೆಯ ಹಾಲಿನಲ್ಲಿ ಅದ್ದಿ ಕಣ್ಣಿನ ಮೇಲೆ ಪದೇ ಪದೇ ಇಡುತ್ತಾ ಬಂದರೆ ಕೆಂಗಣ್ಣು ಗುಣವಾಗುತ್ತದೆ. [illegible]

[illegible]

ಡಬ್ಬೆ ಗಿಡ / ಟಿಕ್ಕಿ ಗಿಡ

ಆತಿ ಭೇದಿ : ಚಿಕಿತ್ಸೆ : ಒಂದು ಹಿಡಿ ಹಣ್ಣೆ ಎಲೆಯನ್ನು ಕಾಂಡದ ಸಮೇತ ಜಜ್ಜಿ ನಾಲ್ಕು ಲೋಟ ನೀರಿನಲ್ಲಿ ಕುದಿಯಲು ಇಡಬೇಕು. ಒಂದು ಲೋಟ ಕಷಾಯವಾಗುವವರೆಗೆ ಬತ್ತಿಸಿ ರುಚಿಗೆ ಬೇಕಾದರೆ ಬೆಲ್ಲವನ್ನು ಹಾಕಿ ಎರಡು ಆಳತೆ ನೀರಿನೊಂದಿಗೆ ಬೆರೆಸಿ ಕುಡಿಯಲು ಕೊಡಬೇಕು.

ಹಣ್ಣೆ ಗಿಡ ಎಲ್ಲ ಕಾಲದಲ್ಲೂ ಸಿಗುವುದಿಲ್ಲ. ಜಾನೆ-ಜುಲೈಯಲ್ಲಿ ಇದು ಜಾಸ್ತಿ ಬೆಳೆಯುತ್ತದೆ. ಇದು ಬೆಳೆದಾಗ ಕಿತ್ತಿಟ್ಟುಕೊಂಡು ಉಪಯೋಗಿಸಬಹುದು. ಕಿತ್ತು ನೆರಳಲ್ಲಿ ಬೆನ್ನಾಗಿ ಒಣಗಿಸಿ ಪುಡಿ ಮಾಡಿ ಸೀಸೆಯಲ್ಲಿ ತುಂಬಿಸಿಟ್ಟುಕೊಳ್ಳಬೇಕು.

ದೊಡ್ಡಪತ್ರೆ

ಕರುಳಬೇನೆ: ಚಿಕಿತ್ಸೆ: ಆಹಾರದಲ್ಲಿ ಹೆಚ್ಚು ದೊಡ್ಡಪತ್ರೆ ಎಲೆಯನ್ನು ಉಪಯೋಗಿಸುತ್ತಾ ಬಂದರೆ ಕರುಳಬೇನೆ ಕಣ್ಮರೆಯಾಗುತ್ತದೆ.

ದಡಾರ: ದಡಾರ ಬಂದ ಐದು ದಿನಗಳು ದೊಡ್ಡ ಪತ್ರೆ ಎಲೆಯ ರಸವನ್ನು ಮಾರಿ ಹೊಟ್ಟೆಗೆ ಕುಡಿಸುವುದು ಒಳ್ಳೆಯದು. ಸೊಪ್ಪನ್ನು ಅರೆದು ಮೈಗೆ ಹಚ್ಚುವುದೂ ಒಳ್ಳೆಯದು.

ಗುರಿ ಮಲಬದ್ಧತೆ: ಒಂದು ಹಿಡಿ ದೊಡ್ಡ ಪತ್ರೆ ಸೊಪ್ಪಿನ ರಸ ತೆಗೆದು ಒಂದು ಲೋಟ ಮಜ್ಜಿಗೆಯಲ್ಲಿ ಬೆರೆಸಿ, ಒಂದು ಹಿಡಿ ಕೊತ್ತಂಬರಿ ಬೀಜದಿಂದ ತೆಗೆದ ಒಂದು ಲೋಟ ಕಷಾಯವನ್ನು ಅರಿಸಿ ಬೆರೆಸಿ ಮಾರಿ ಹೊಟ್ಟೆಗೆ ತೆಗೆದುಕೊಳ್ಳಬೇಕು. ದಿನದಲ್ಲಿ ಇದನ್ನು ಮತ್ತೆ ಮತ್ತೆ ತೆಗೆದುಕೊಳ್ಳುವುದು ಒಳ್ಳೆಯದು.

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ROLE OF TRADITIONAL MEDICINE IN PRIMARY HEALTH CARE

Traditional systems of medicine are deeply rooted in the civilization of Asian region and India in particular has recognized systems of traditional medicine which have continued to flourish upto modern times. Practitioners of traditional systems of medicine in like manner have remained a part of the community they serve. Being sensitive to the traditions,beliefes and customs of the people they exert considerable influence within the community in relation to health and health related practices.

Recognizing this health man-power potential in the delivery of primary health care services the joint UNICEF / WHO study recommended to mobilise and train practitioners of traditional systems of medicine for primary health care services.

Traditional medicine is the sum total of all the knowledge and practices,whether explicable or not, used in diagnosis,prevention and elimination of physical,mental or social imbalance and relying exculsively on practical experience and observation handed down from generation to generation,whether verbally or in writing.2.

The traditional systems of medicine practiced in our country recognised by the Government include the Ayurveda, Sidda,Unani,Yoga and naturopathy systems. In our country today there are 4,50,000(3) traditional practitioners out of which,3,41,408 are traditionally trained. This includes herbalist,bonesetters,spiritual healers and traditional birth attendants and another 1,08,592 institutionally qualified practitioners in various systems of trdditional medicine. there are

It is unfortunate that a large number of these practitioners are in the field but largely working outside the National Health Service system. The manpower potential available may be utilised for primary health care services for achieving the goal of health for all by the year 2000.

A comibation of traditional healing and modern medicine appears to be the most promising and appropriate for the health problems facing the developing countries. Ayurveda or the "Science of Life"contributes much in this direction as majority of the Ayurvedic preparations are cost-effective non-toxic and can be prepared locally.

It is well known that in many ailments of functional origin like constipation dyspepsia, Indigestion and cases that have proved refractory to modern medical treatment good results have been produced by the Indigenous system. Yoga practice and meditation, forms the part of the indigenous system. They were once considered only as a subjective experience. These practices have been objectively assessed and their physiological effects and possible clinical application in many anxiety disorders are being recognised.

The practitioners of Ayurveda normally prepare the medicines needed for the patients in their own clinics from simple decoctions to powder. The physician also advises the patient to prepare them in their own homes, from locally available herbs. For example in villages combination of Thulasi leaves juice,pepper powder and honey for cough is used which is inexpensive,effective and also easily available in rural areas. However in urban areas the practitioners give prescriptions for patent drugs which are available at Chemists and Drug shops. The large scale production of Ayurvedic drugs is now undertaken by many pharmaceutical companies like Himalaya Drug Company,Baidyanath Company and Indian Medical Practitioners Co-operative Pharmacy and Stores Limited(IMCOPS) Madras using modern pharmaceutical technology. These products include patent,proprietary and classical preparations. Every state has got its own drug standardisation centre which supervises and maintains standard of Ayurvedic drugs. There are as many as 4500 pharmacies which produce these drugs in South - Eastern Asia, Statutory controls over the manufacture of Ayurvedic drugs are also enforced in some countries.

Ayurvedic pharmacopoeia contains 8000 receipes. Besides these there are large number of receipes which have not been documented but which are used by the community in every day practice.

Paper Presented by Dr.T.N.Manjunath,Assistant Medical Officer,(ISM) CHAD Programme, C.M.C.,Vellore at the workshop on "Towards a People-oriented Drug policy " at St.John's Medical College, Bangalore from 23rd to 25th November,1984.

Ayurvedic [illegible] medicines are prepared in the form of distilates(Arka) fermented preparations(Asava,Arishta)linctus (lehya) incinerated minerals, shells(bhasma) powder (Choorna) ghee(Ghritham) Tablets,pills(vati) decoction(Kwatha).

The Community Health and Development (CHAD) Programme of the Community Health Department of Christian Medical College is studying the feasibility of incorporating the traditional practitioners in the Primary Health Care. The CHAD Programme provides services for the entire block of Kaniyambadi with a population of 80,000. This study is being conducted in a population of 15,000.

Availability of Ayurvedic,Allopathic and Accupuncture treatment under the same roof is a unique feature of the CHAD health programme and is a definite step towards integration.

The objective of the study is to identify the constraints which prevents the effective involvement of practitioners of traditional medicine in primary health care programme and evolve strategies for their greater involvement in promotion of Family Planning, Maternal and Child Health(MCH) and immunization programmes. It also includes their orientation,training,monitoring and supervision and identify areas where integration is possible. It also aims to identify possible linkage between the practitioners of traditional systems of medicine and national health care system.

11 Practitioners have been identified in the 15,000 population. These practitioners were interviewed,and their willingness to participate in the programme determined. The practitioners are visited by the Assistant Medical Officer of Indian Systems of medicine of the CHAD Programme and their activities are supervised every week, during which he tries to establish a good rapport and get their participation in the health programmes.

Initially they were reluctant to share their knowledge and practices. After gaining the confidence in the programme through the repeated visits of the health team they slowly started sharing their knowledge and techniques. They were also afraid that their practices may be asked to be stopped or controlled. This was overcome by assuring them that their practices which are good and helping the community will be maintained and strengthened . They were also informed of the unhealthy practices like branding, and persuaded to discontinue them.

They had misconception that vasectomy affects their general health and makes man very weak and he is suspectible to diseases. This was removed by continued education by all categories of health workers of the programme.

Initially they were treating even those conditions which were not responding to their treatment and afer education they are convinced that certain conditions like high fever,of 3 days duration,bleeding should be referred for modern medical care.

Therewas no proper reporting system regarding the type of cases treated. They were asked to maintain a record in which they have to register the Name,Age,Sex,Complaint, Treatment,Response and referral. This will be scrutinized and supervised.

In the early stages there was over reporting of cases by the practitioners. This was cross checked by surprise visits when they were asked to show the cases. Following this over reporting came down.

It is observed from the preliminary studies that the traditional practitioners by virtue of their close association with the community plays a key role as educator and change agent on matters relating to health and family welfare. He,as a part of health team,actively involves himself with national health programmes both as a practitioner and as a community leader. They are being used in the Tuberculosis, filariasis, RF/RHD,Malaria eradication programmes.

Diarrhoeal diseases which causes high morbidity and high infant mortality needs promotion of oral rehydration therapy,which would make an impact particularly on the infant mortality. The traditional practitioners have been educated on the correct use of oral rehydration salts and its practical application in the treatment of acute diarrhoeas with the ultimate goal of making oral rehydration therapy for treatment of diarrhoeas a routine practice in the community.

ORS packets are distributed to them repeatedly and they are taught to prepare ideal oral rehydration solution in theabscence of readymade packets in which they have shown a definite improvement in the management of diarrhoeas.

These traditional practitioners are educated on various health and health related problems in their own village and in their own language. Oral rehydration for the child with diarrhoea has also been accepted with enthusiasm in preference to the crude cauterisation or branding. This is really a change brought about by their

education ,helped changing their attitude regarding some beliefs which does not have any basis.

The high cost of drugs and inability of many developing countries to purchase such drugs have prompted several countries to look forward for local products in the form of medicinal plants and herbal medicines that have proved to be effective,safe, in expensive and culturally acceptable.

In this direction a herbal garden is grown in CHAD Campus as a means of home remedy for common ailments and also encouraging traditional practitioners to identify locally available and commonly used medicinal plants and herbs and make use of them in their treatment. The community is being educated regarding herbs in the Mahila Mandal (Women's Group) as a means of home remedy to make people become more self reliant and make herbal medicine as people's medicine.

A few low-cost effective remedies taught at Mahila Mandal(Womens Club) meeting and used by the community.

1. For cold inhalations of cucalyptus oil in boiling water helps much reliving cold. or fumes of turmeric powder.
2. Pomergranate skin dry powder in buttermilk helps in certain cases in reliving Dysentry.
3. Decoction of oman seeds helps in reliving tummey ache in case of idigestion.
4. For fresh cuts and wounds fresh ginger paste with Jaggery helps much in healing and stops pus formation.
5. Scabies paste of margosa leaves mixed with turmeric helps much.
6. For scorpion stings rubbing a piece of onion on the site of the sting and refer to hospital.
7. For intestinal worms seeds of papaya works effectively.
8. Clove oil application for tooth ache.
9. For certain diabetic cases in the community bitter gourd has helped much in bringing down blood sugar level.

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Approach paper on Traditional Medicine

(1) "Traditional Medicine is the sum total of all the knowledge and practices, whether explicable or not, used in diagnosis prevention and elimination of physical, mental or social imbalance and relying exclusively on practicial experience and observation handed down from generation to generation whether verbally or in writing".(WHO TRS-22).

(2) Traditional Medicine might also be considered as a solid amalgamation of dynamic medical know-how and ancestral experience.

While there exists a number of traditional systems of medicine as well as traditional practices in India and all over the world, for practical purposes a few of global importance depending on their long experience, authenticity as also current applicability and acceptability by masses are identified.

Traditional systems of Medicine and practices that are recognised by Government of India are (1) Ayurveda, (2) Siddha, (3) Unani, (4) Yoga, (5) Homeopathy. The traditional practices are (1) Acumpuncture, (2) Naturopathy (3) Folk Medicine and Tribal Medicine (4) Herbal Medicine.

The global importance of traditional medicine and practices has now been recognised and some of the practices have become an integral part of the social culture, particularly in South East Asia. Like China, India and Vietnam.

Promotion of Traditional Medicine is the need of the day. ~~Why because of~~ The increasing cost of Modern Medical Care and growing adverse effects (toxic effects) of synthetic drugs, non-availability to the masses in remote and rural areas, ~~as opposed to~~ Traditional Medicine which is affordable by masses and less or no side effects and still easily available to the rural masses in remote areas and still sought after. Promotion can be done through following approaches by various levels of health professionals. Any organization wants to start a programme on traditional medicine the first things is to take a stock of traditional healers, categories and practices in a specified geographic area. Then after categorisation, the individual practices can be studied and validated through logical (scientific) knowledge. From this (1) we know the existing human health resources/personnel available in traditional medicine (2) we also come to know about various beneficial and harmful traditional health practices if any (3) based on this information people can be educated about beneficial effects of traditional medicine after validation.

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Once the healers are identified they should be suitably trained to upgrade their existing knowledge and also of the community.

The other approach can be to take stock of locally available medicinal flora, and its use ~~locally~~ with the help of local healers and documentation (i) Then its validation from the available scientific knowledge, toxicity and clinical studies (ii) study of the local market and potential for medicinal plants (iii) totake up cultivation of such medicinal plants and also renewal or extinct species which are needed for local cumsumption with the help of Agronomists, Ethnobotanists and physicians (iv) To popularise few common medicinal plants as home remedies after studying the local practices with logical reasoning (v) to popularise a few kitchen condiments as popular home remedies for common ailments.

Community health care institutions

1. To take up training programme of traditional healers
2. To conduct workshops for various levels of health personnel on traditional medicine
3. Demonstration plots on various medicinal plants for identification and training.

Research Institutions on TSM

1. To take up basic literary research on all the available literatures and manuscripts on TSM ? (term)
2. To take up pharmacological tests and efficacy studies of medicincal plants
3. Clinical studies of the tested home remedies
4. Clinical trials of medicinal plants

Planners

1. To take policy decisions on promotion and development of TSM in general and preservation of medicinal flora and manuscripts in particular
2. Under the social forestry programme inclusion of plants of food, fodder, and medicinal value in daily use
3. To shorten the deviation of public education and dilution of resources there is a need for education revolution to introduce and integrate various aspects of TSM in educational curricula and specially in school health programmes and training programmes of various levels of health professionals.

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4. To establish research institutions for further advanced research in TSM where modern medicines has failed.

Information

Collection, collation and dissemination is equally an important area. Hence there is an urgent need to collect information on various institutions at International level, national level, regional level, voluntary organizations and government institutions working on various traditional systems of health care and practices so there can be a free exchange of knowledge and mutual utilisation of expertise will be easy. This information need to be disseminated to various organisations working in grass roots in different capacities.

Networking

Networking is equally an important area where information on current infrastructure available at global, national level and with various non-government organisations and government organisations working on health and health related issues (inclusive of traditional medicine) has to be collected for effective networking and mutual exchange of knowledge, expertise and dissemination.

Dr T N Manjunath
People's Education for Health Action
A Division of ■ Voluntary Health Association of India
16.2.1989.

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BACKGROUND PAPER PREPARED FOR
FEVORD-K ANNUAL GENERAL BODY
MEETING AT [redacted] BELGAUM
17-18 MAY 1990

by

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C O N T E N T S

TRADITIONAL MEDICINE

WHAT IS TRADITIONAL MEDICINE:

The history of medicine is as old as t.e history of man. Each culture has catered for its pattern of illness with a suitable indigenous system of health care. There are essential differences in medical practices from people to people as their traditions and culture differ.

The World Health Organisation defines Traditional Medicine as "the sum total of all the knowledge and practices, whether explicable or not, used in diagnosis, prevention and elimination of physical, mental or social imbalance and relying exclusively on practical experience and observation handed down from generation to generation, whether verbally or in writing".

Traditional Medicine does not define a unified homogenous practice. Formalised medical systems exist, as also informal folk practices. The Government of India officially recognises formalised systems like Ayurveda, Siddha, Unani, Yoga, Naturopathy and Homoeopathy in addition to Allopathy. Tibetan Medicine is gaining popularity in areas of our country contiguons with Tibet and also in and around the Tibetan Refugee settlements here. Accupuncture and Acupressure are being increasingly accepted in urban India and are popular in the rural areas of the North-East. Other non-formalised systems like Tribal Medical Practices are being documented and studied in the tribal areas.

SALIENT FEATURES OF HEALTH CARE SYSTEMS PREVALENT IN INDIA
(Non Allopathic)

a) AyURVEDA: 'Ayurveda' means, "science of life". This system traces its origin to 'Rig Vedic' times, over 3000 years ago. It deals elaborately with measures for a healthy life, and has a wide range of therapeutic measures to combat illness. It has an elaborate theoretical framework evolved from substantial observational data. The Ayurvedic concept of health is similar to what the W.H.O. has evolved as a definition of health, viz: physical, mental, social and spiritual well being and not just the absence of disease or infirmity. This system is prevalent all over India.

b) UNANI-TIBB: derives from Greco-Arab medicine and entered India around the eleventh century. It is based on the four-humor theory of Hippocrates, who is considered the father of modern medicine. Avicenna, one of its greatest scholars defines Tibb as, "the science with which we learn of the various states of the body in health and when not in health, and the means by which health is likely to be lost and when lost, is likely to be restored". It is used more in Northern India in areas where Islam is predominant.

c) SIDDHA: Siddha means "sure and true". It has its roots in Tamil culture and is said to have originated from the sage Agasthiar. Its philosophy and diagnostic methods are similar to Ayurveda, with differences in therapeutics. It has been recorded in Tamil and is more prevalent in the Tamil-speaking areas of our country.

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d) YOGA: Yoga is one of the six orthodox systems of Indian Philosophy aiming at liberating the soul through perfection. Yoga strives for full and integrated development of an individual. It can be utilized as a safe and effective method for good health, through mastery of the mind. Along with Ayurveda, it dates back to the Rig Vedic times.

e) NATURE CURE: Naturopathy is based on the art of living according to the principles of nature. Disease is considered as the body's effort to cleanse itself of impurities brought about by faulty living. Nature & cure utilizes air, water, earth and Sun-rays abundantly available in Nature for cure. It stresses prevention of disease and proper diet, exercise and rest to maintain health. Mahatma Gandhi was a great believer in naturopathy.

f) TIBETAN MEDICINE: Tibetan medicine has been in existence for over 2500 years and is said to have originated from the teachings of Sakyamuni Buddha. It had interactions with Ayurveda, Greek medicine, Arab medicine and has incorporated aspects of all these systems into it. It believes that all suffering is rooted in ignorance of existence, which gives rise to poisons of the mind, manifesting as disease. Tibetan medicine has a well developed diagnostic and therapeutic system, utilizing herbs, minerals, metals, salts, precious and semi-precious stones, as well as astrology.

g) HOMOEOPATHY: Homoeopathy began in the 18th century with Samuel Hahnemann, a German doctor who based his therapies on the "Law of similars" and "minimal doses". It considers a person's mental, physical and environmental situation as a whole. India has the largest manpower of Homoeopathic physicians in the world.

h) ACUPUNCTURE / ACUPRESSURE: is the traditional Chinese system of medicine dating back to over 3500 years. It is based on the concept of energy in the body which circulates in meridians. Disease manifests when there is imbalance in this energy and its flow. It is used as complementary and supplimentary to herbal, dietary, physiotherapy and other measures. It is well integrated with other systems of medicine in China, and is shown as an example of "Integration".

WHY TRADITIONAL MEDICINE:

"If human history were telescoped into a day, modern medicine would put in an appearance only in the last few seconds - Diana Melrose in "Bitter Pills".

a) Relevance: Allopathic medicine was introduced into our country by the British rulers, mainly for themselves. Having state support and with suppression of the indigenous systems prevalent, it has become the dominant system both in the Governmental and Non-governmental efforts at health care. It is Western in origin and with continuing strong

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links with advanced research establishments in the West. Consequently, "western models" tend to be transplanted for solution of local health problems without success. Traditional systems of medicine have survived through history as a natural curative resource base which is however largely unutilized.

b) Cost: Being tagged to the affluence of the West, medical aid has progressively increased in cost. The Government of India, which takes major responsibility for providing of Allopathic health services finds it difficult to meet these rising costs. It is becoming inaccessible to the people who really need it - the poor.

c) Accessibility: According to 'World Drug Situation', less than 25% of the Indian population has access to Allopathic drugs.

Traditional medicine is used by a significant number of people as the only health resource available, or as a substitute for or a complement to allopathic services.

d) Holistic approach: Traditional medicine practices are believed to be holistic and concerned with the totality of human functions in society. Illness is seen not only in terms of biochemical and supernatural disharmony, but also as a breakdown in the interaction of the patient with others within his social environment. The psychological/ psychosomatic value of traditional medicne is widely recognised. The traditional practitioner often depends more on his ability to mobilize the patient's hopes, restore his morale, and gain his re-acceptance by his group, than on his pharmacoepocia.

e) Under-utilized resource:

The former Director General of W.H.O. Dr.H.Mahler said, "For far too long, traditional systems of medicine and 'modern' medicine have gone their separate ways in mutual antipathy. Yet are not their goals identical.. to improve the health of mankind and thereby the quality of life? Only the blinkered mind would assume that each has nothing to learn from the other".

The National Health Policy statement of 1989 clearly states that, "the country has a large stock of health manpower comprising of private practitioners in various systems, for example, Ayurveda, Unani, Siddha, Homoeopathy, Yoga, Naturopathy, etc. This resource has not so far been adequately utilized.

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The two tables below give an idea of the Health resources in our country and State.

TABLE I: INDIA

	Ayurveda	Unani	Siddha	Yoga	Naturo-pathy	Allo-pathy
1.No.of Institutionally qualified Practitioners.	1,08,085	7,912	1,183	-	43	3,30,755
2.Total No.of registered practitioners	2,72,800	28,711	11,581	-	108	3,30,755
3.No.of Hospitals	1,469	101	106	6	10	9,831
4.Total beds provided	15,913	1,267	885	40	190	5,85,889
5.No.of Dispensaries.	12,109	871	316	4	43	1,18,806
6.No.of Colleges/ Institutions	100	18	2	34	3	125

(Source: Health Information India-1988)

TABLE II: KARNATAKA

	Ayurveda	Unani	Homoeo-pathy	Naturo-pathy	Siddha	Yoga
1.No.of Colleges	3	1	1	1		
2.No.of Hospitals	12 7 dist. level, 3 teaching	4	2	1	1 wing in IISM B'lore	Wings at 3 Hosp. B'lore Mysore Bellary
3.No.of Dispensaries	360	32	10	5		

(Source Status Report 1988-89, Department of Health & Family Welfare, Karnataka Government)

Traditional medical systems are now widely adopted through government policy and have been institutionalised at national and State levels, in universities and other training centres, and in the utilization of all types of personnel in health care delivery systems in the rural areas, and in drug manufacturing units.

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Traditional Birth Attendants (TBAs) or Traditional midwives have been well recognised as a specific group within the traditional sector, as they deliver a high proportion of children and focus on maternal and child health in their activities.

The understanding of and contact with Traditional medical practices will help us to be constructively critical of the prevailing health services and may be useful in building up a more comprehensive approach to health.

WHAT CAN WE DO ABOUT IT?

All healing practices are legitimated by people use them, by their efforts and capabilities to cure ills and improve the public's health.

It does not mean accepting any practice uncritically. But it does imply a recognition that there are values and be benefits, as well as shortcomings and dangers, in both allopathic and traditional practices.

People use all the systems for their various illnesses and "health problems", using their own mechanisms to determine choice. They include experience, hearsay evidence, tradition, peer-group pressure, medical advertising, and sometimes informed opinion.

For available Traditional Medicine to be useful to people, we need to know:

1. What human and material resources in Traditional Medicine are available in our areas of work.

2. How we could critically look at its usefulness in health care.

3. How could this knowledge be recorded/utilized/disseminated/validated for common good, and

4. How it could be integrated into the prevailing health care system.

Let us make a beginning towards Health.

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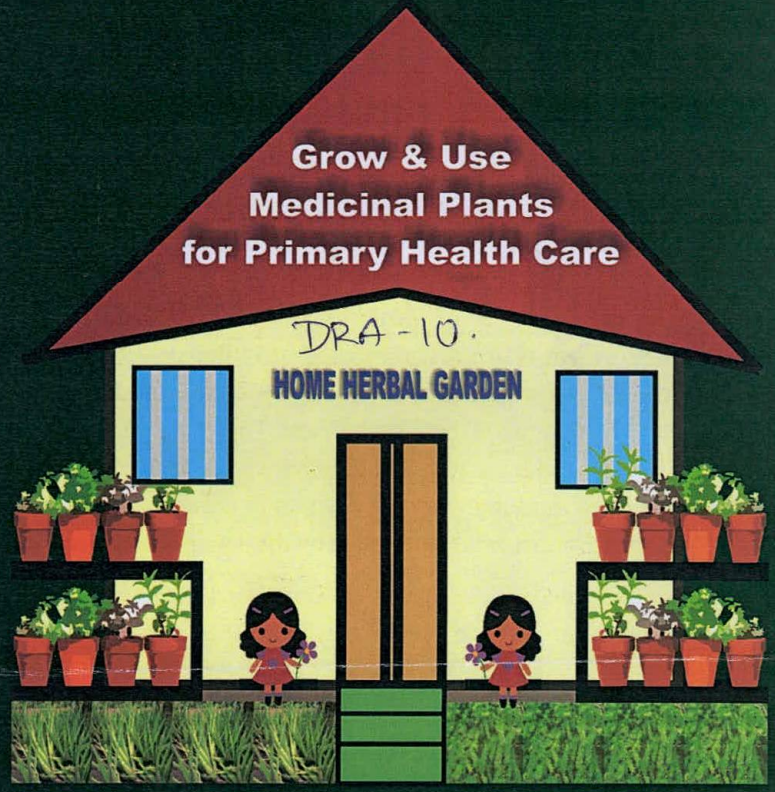
'Adoption of Medicinal Plants'

"So that when they grow up
..... They will take care of you"

HOME HERBAL GARDEN



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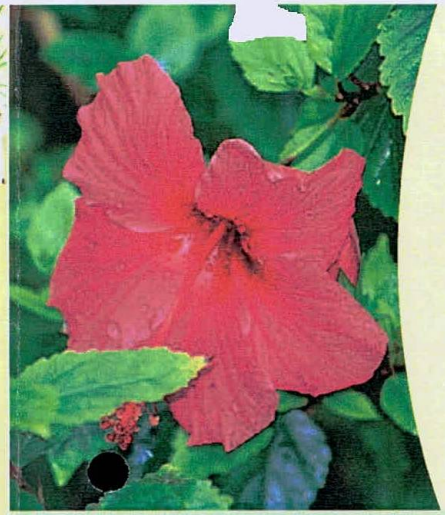
The traditional primary health care system in India is embodied in a 'people's health culture'. This culture is based on very effective and sound, region-specific health practices involving about 8000 species of plants across the country. Whereas most of the medicinal plants used in these local health cultures were freely available in the vicinity of the households, some of these were also raised and maintained in the home gardens. This 'people's health culture' provided an easy and cost effective succor to day-to-day primary health care problems of the local communities over centuries on one hand, also continued to develop and evolve alongside the codified Indian Systems of Medicine like Ayurveda, Siddha, Unani and Gso-rigpa on the other hand.

Tribal groups and traditional healers of Chhattisgarh state are rich in indigenous knowledge of medicinal plants. The tribes of Chhattisgarh believe that they acquired the knowledge of medicinal properties of various plants from their deity, transmitted in different ways. Some of them claim that they received this knowledge when in a trance under the visitation of a deity upon them. Since this knowledge is largely gained from divine sources, they are averse to charging a fee for treatment. They believe that the medicine may lose its potency, and the treatment may fail if they levy a fee for a god-sent gift. In recent times though, with changed thinking, they have begun to view it as a means of livelihood, and so sometimes do charge an affordable fee, paid by the patient in cash or in kind.

Through the ages, medicinal plants have been used for a variety of purposes and home grown medicinal plants offer a high quality, low cost, easily accessible and safe primary health care option. Today, urban people are losing touch with nature and this wealth. In this crucial time, the concept of Home Herbal Garden (HHG) is a ray of hope for developing interest of people in herbs or primary health care. As we know that by nature, human beings give importance to their belongings. So, if a person is planting a plant in his own garden than, it will be important for him/her. Moreover the concept itself is very strong as when the diseases comes, one can get the remedy in his/her own home with no extra cost. The plants, promoted under the Home Herbal Garden (HHG) scheme, are selected with great care and, in consultation with Traditional Healers. Those plants are easy to maintain, require minimum space, have medicinal value, and are safe and effective; besides having aesthetic value as well. With a view to attract the attention of new generation, towards herbal culture, C.G. State Medicinal plants Board, Raipur is distributing basket of selected medicinal plants, in the state.



Gudhal

Hibiscus rosa-sinensis

Part Used : Flower

It is a ornamental perineal shrub.

Use :

- Nourishment of Hair - Grind fresh flowers to make paste. Apply to the head,15-20 minutes before taking head bath on a regular basis.
- White discharge : Grind 4 fresh flowers to make paste. Take the paste on empty stomach in the morning followed by warm milk for 7 days.

Brahmi

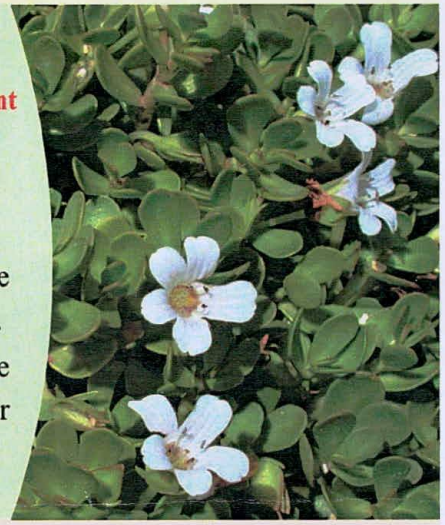
Bacopa monnieri

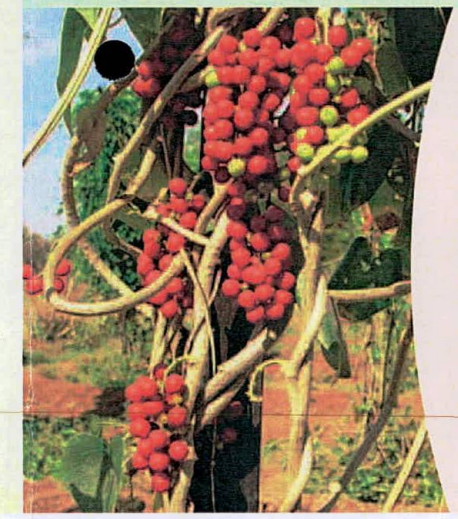
Part Used : Whole Plant

It is a spreading fleshy herb.

Use :

- Hair Care - Brahmi & sesame oil. Boil the mixture, filter the oil and apply to the hair daily.
- Mental Tonics - Prepare milk decoction of the whole shoots. Take 1 cup of the decoction per





Giloe

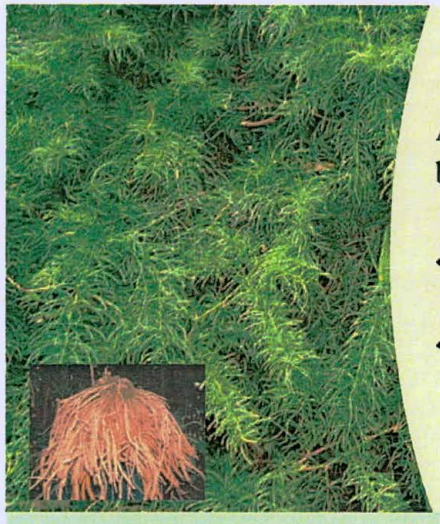
Tinospora cordifolia

Part Used : Stem

It is a large spreading climber leaves are dark green, heart shaped.

Use :

- Acidity - Crush fresh shoot to extract juice take 1 tsp. of the juice with honey .
- Liver tonics - Prepare Giloe decoction of the shoots take 1 cup of the decoction per day.



Satawar

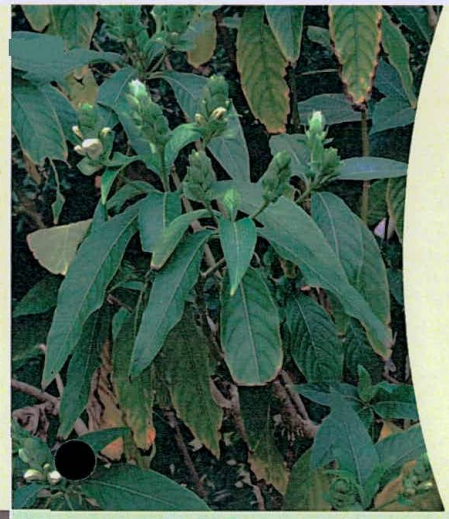
Asparagus racemosus

Part Used : Bulb

A spiny climbing plant with leaf like rudimentary branchlets arranged in whorls.

Use :

- Acidity - Crush fresh tubers to extract juice take this juice with sugar in the morning and evening.
- Purifying Breast Milk - Take fresh tubers peel the skin and wash. Crush the tubers and extract the juice. Warm the juice slightly. Take 1 cup of the juice with 1tsp. of sugar in the morning.



Adusa

Adhatoda vasica

Part Used : Leaf, Root

A branched, evergreen shrub with broad leaves tapering at both ends.

Use :

- Excessive menstruation - Crush Adusa leaves to extract juice take fresh juice with honey.
- Dry Cough/Asthama/Cord - Take 2-3 throughly washed tender Adusaa leaves, boil these in 1 cup of water and reduce it to half. Take the fresh diction.

Stevia

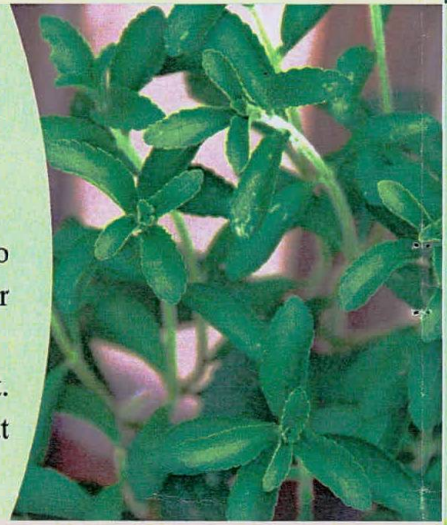
Stevia rebaudiana

Part Used: Leaf

It is a annual herb.

Use :

- Diabetes - Dry the leaves in shade and pound to make powder. Take 3gm of powder with water after food.
- Stevia extract has been in use to reduce weight. Swelling in the legs and as a tonic to treat



Aloevera

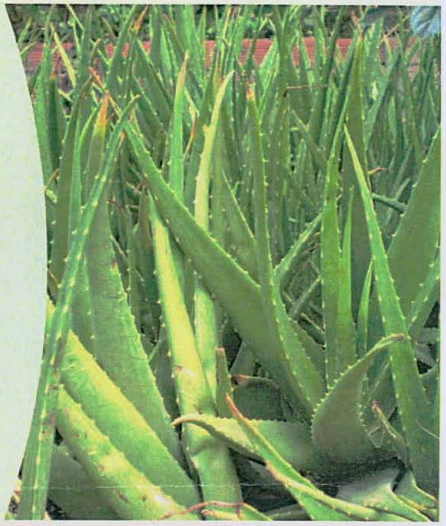
Aloe barbadensis

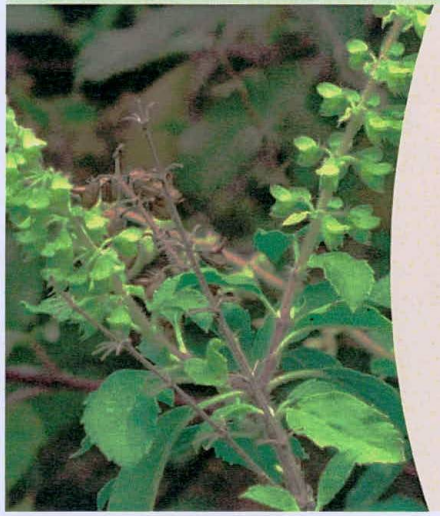
Part Used : Leaf

It is a cactus like perineal plant with a stout stem

Use :

- Cuts, Wounds & Burns - Aloevera slit open a leaf and scoop out its pulp apply this pulp over wounded port twice daily till the wound heals.
- Eye burning sensation and redness use





Tulsi

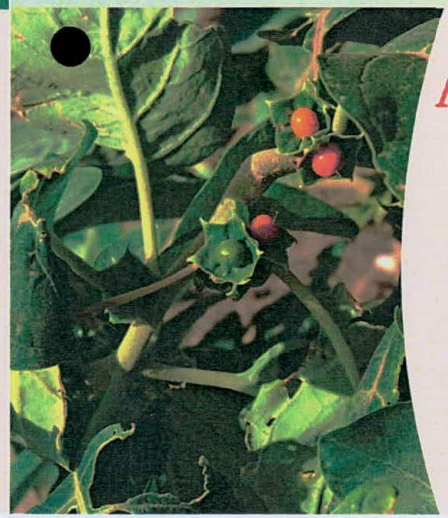
Ocimum sanctum

Part Used: Leaf

It is an evergreen erect herb having greenish to purplish appearance.

Use :

- Conjunctivitis - Take 5-7 fresh leaves and extract juice mix the juice with 3 drops of honey. Apply 2-3 drops of this mixture in both the eyes as bed time.
- Wet cough Use - extract juice of 10-20 fresh Tulsi leaves mix this juice with 1tsp. of honey and take twice daily for 3 days.



Ashwagandha

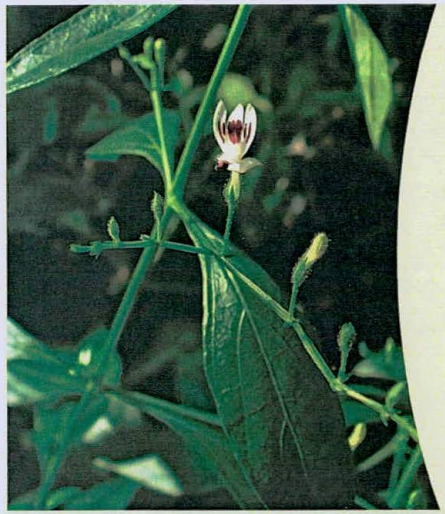
Withania somnifera

Part Used : Leaf, Root

It is an erect and branched shrub.

Use :

- Chronic headache - Use Ashwagandha root to make powder, take 1 tsp of this powder with 1/2 cup of warm milk.
- General immunity - Use Ashwagandha root decoction, take 1/2 cup of the decoction twice daily.



Kalmegh

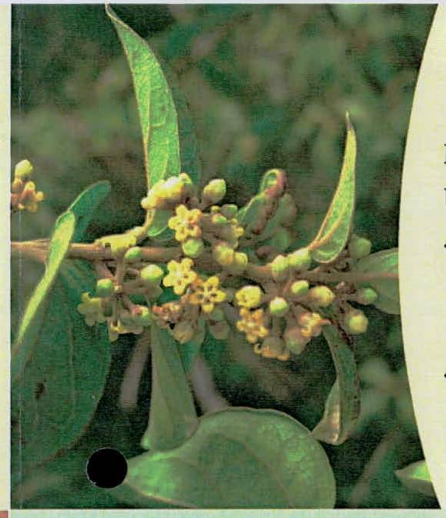
Andrographis paniculata

Part Used : Whole Plant

It is a small erect branched annual herb.

Use :

- Fever - Boil 30 gm fresh shoots in 1 liter of water until it is reduced to 120 ml. take this decoction in 2 equal doses twice a day on



Gudmar

Gymnema sylvestre

Part Used : Leaf, Roots

It is a woody, large, branched, climber with milky latex.

Use :

- Fever : Take some fresh Gudmar leaves and wash. Mix one part of leaves with four parts of water and boil to reduce. Take 1ml. of decoction twice a day.
- Diabtes : Dry the Gudmar leaves in shade and pound to make powder. Take 3-6 gm of the powder with warm water after food.

Shankhpushpi

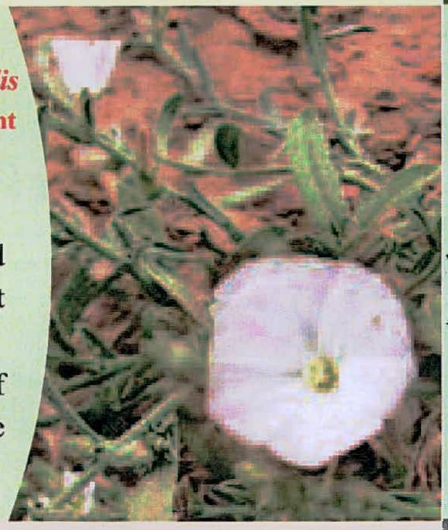
Convolvulus pluricaulis

Part Used : Whole Plant

It is a creeping herb.

Use :

- Mental tonic - Crush the whole shoots and prepare decoction take 1/2 cup of decoction at bed time.
- Hair care - Mix equal quantities of plant juice of Shankapushpi and sesame oil. Boil the mixture and apply to the hair daily.



Mehandi

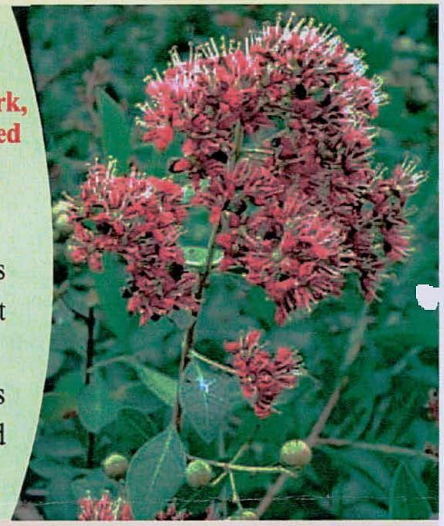
Lawsonia inermis

Part Used : Leaf, Bark, Fruit, Seed

It is a large shrub with dense angular branches

Use :

- Burning sensation of feel : Crush fresh leaves to extract juice, Apply the juice all over the feet and soles in the morning.
- Fungal infections - Grind fresh Mehandi leaves to make paste, Apply this paste on affected areas in the morning and evening.



Mandukparni

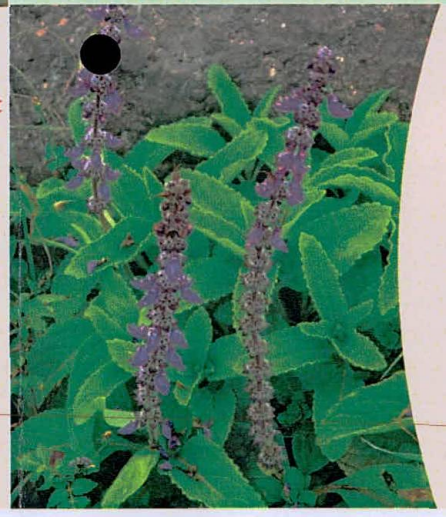
Centella asiatica

Part Used : Whole Plant

It is a creeping herb with kidney shaped leaves.

Use :

- Mental tonics - Crush the whole shoots to extract juice take 1ml of fresh juice at bed time.
- Fever - Make decoction of 30 gm each of Madukparni and tulsi leaves in 250 ML of water and reduce it to half. Mix a pinch of black pepper in 1/2 cup of the decoction and take thrice daily.



Patharchur

Coleus forskohlii

Part Used: Leaf, Roots

It is an evergreen short shrubby plant.

Use :

- Wet cough - Mix 1 of Patharchur leaf juice and 1-4 of sugar and take 2-3 time a day for 3 days.
- Headache -Mix 1 of Patharchur leaf juice with